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Contributed Articles.

On Important Apiarian Subjects.

The Production of Extracted Honey.

The first in a series of articles on the subject.

BY CHAS. DADANT.

Until about 30 years ago there were but three ways of harvesting honey, viz.: by smothering the bees with brimstone burning under the hives to get the entire contents of the box; by driving out the bees for the same purpose; and by placing caps, or boxes, on the top of the hives, to secure the surplus honey.

The smothering of bees, which has been practiced for thousands of years, is yet carried on in some parts of Europe.

CHAS. DADANT.

Even not far from Paris, the center of civilization and refinement, in Gatinais—a district where the sainfoin (literal translation, "healthy hay"), or French grass, is as extensively cultivated as timothy and clover in North America—this custom of the dark ages seems to still prevail with quite a number of people.

Every spring these bee-keepers of Gatinais purchase colonies in box or straw hives—swarms of the previous year. These purchases extend several hundred miles away, and the colonies are sent, by carloads, to the Gatinais apiaries, where the bees are brimstoned as soon as the hive has been filled on the flowers of the sainfoin. As there are two varieties of this

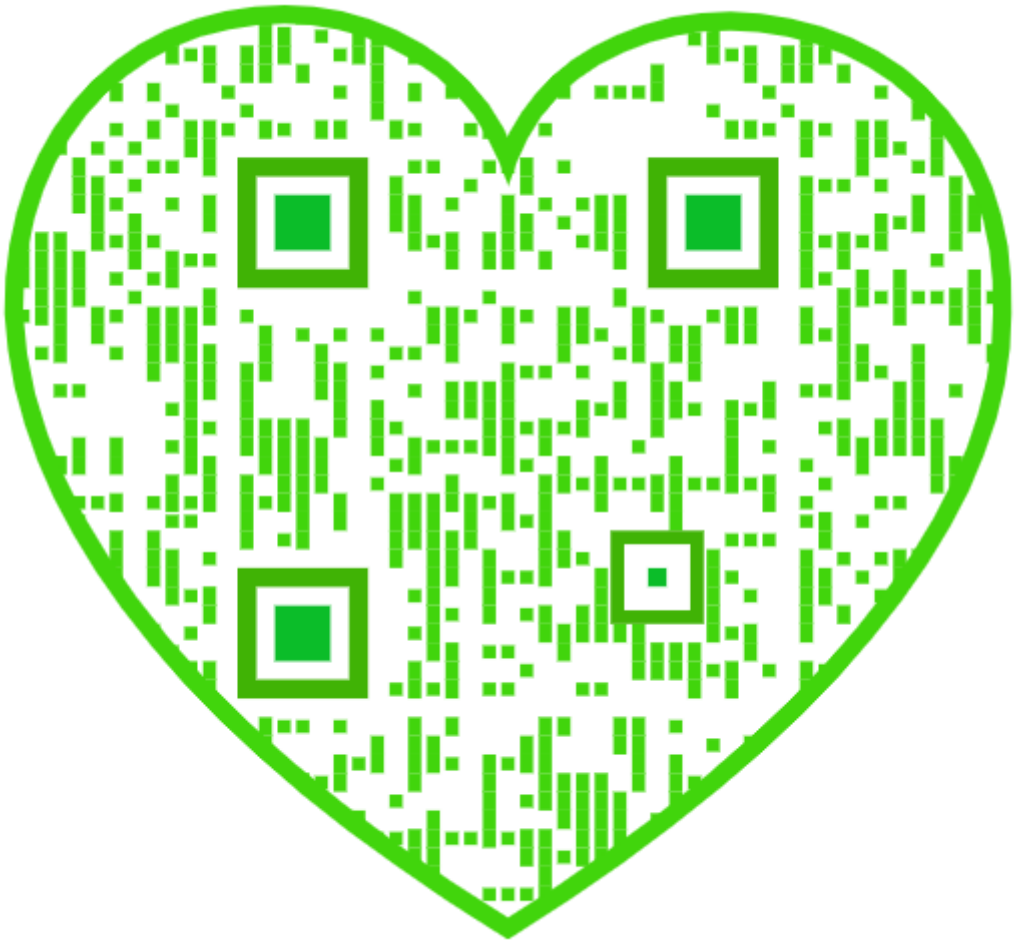
C. P. DADANT.

plant, one blooming a little later than the other, it gives a large quantity of honey, unsurpassed in quality. It is to be much regretted that this good honey and forage leguminous plant cannot be grown successfully here. Was it ever tried in the West—in Colorado, California, or Oregon?

The profits thus obtained by the producers of the swarms, and by the slaughterers of the bees, are so large that they delay the introduction of movable-frame hives in the villages where these customs prevail.

After the bees have been killed, the combs are cut out of the hives and sorted. Then each grade is put into a solar honey-extractor, or in a tin box, subjected to a high temperature. After a few days, the honey having been drawn out, the remaining combs are put under a powerful press, to obtain what little honey may remain in the wax.

The second method employed—that of driving out the



bees—is not as cruel and destructive as the brimstone method; but it does not give as great results as the Gatinais method.

The use of caps, or large boxes, in which the bees place their surplus, was one step towards progress; but the combs had to be broken to be removed from the box.

The invention of the movable frame, and of the honey-extractor, has afforded bee-keepers the means of taking out of the hives the combs loaded with honey, and of returning them to the bees when empty, without damaging them, or injuring, or killing a single bee. Every one of my readers undoubtedly uses movable-frame hives and honey-extractors, but, to some of them, the history of the invention of the honey-extractor will, no doubt, be interesting.

In 1866, a Major of the Austrian army—Von Hruschka—who lived in Dolo, a village near Venice, Italy (at that time Lombardy and Venetia belonging to Austria), had a few colonies of bees in his garden. One day, while examining the hives, he gave his little son a piece of comb honey in a saucer, to take to the house. The boy put the saucer in his school basket, and, in play, whirled it around his head. Then Hruschka noticed that the motion had forced the honey out of the comb into the dish. Enlightened by this unexpected experiment, Von Hruschka made a square tin box with a quadrangular slanting bottom closed with a cork, and furnished with a wire-gauze inside, to support the comb, and, suspending it on an iron handle, he revolved it around his head, as his son had done with the dish. (See Fig. 1.)

He soon, however, improved upon this slow method, and invented a machine made of a wooden pillar supported by a pyramidal frame of three wooden posts, and carrying a revolving horizontal cross-beam 12 feet in length, at the ends of which two extracting boxes, or baskets, were fastened. This machine was turned by two men, with ropes as motors, one of these ropes winding around the vertical axis while the other rope was being unwound. (See Fig. 2.)

Although this extractor was very simple, it was too cumbrous and expensive to manage. Hruschka then made an extractor, which was exhibited at the Paris Exposition of insects in August, 1868, and another that was shown at the bee-keepers' exhibit in Milan, Italy, in December of the same year. These machines were both entered under the name of Angelo Lessame, of Dolo, Venetia. They were made much like the extractors of to-day, of a square basket covered with wire-gauze and revolving inside of a tin can. They were small machines, although made for four combs, for they had been made for the frames of the standard German hives, the combs

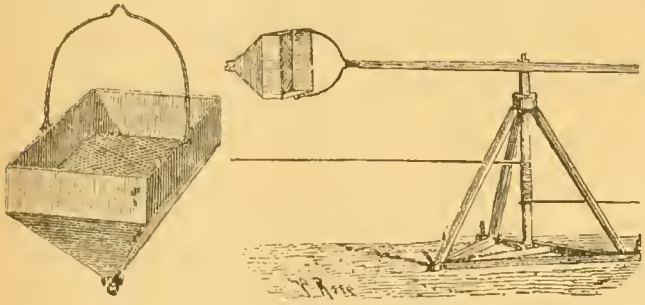


Fig. 1. The First Honey-Extractors. Fig. 2.

of which are only 10x10 inches. The basket was revolved by two wheels, one at the middle, the other at the side, and connected by an endless rope. (See Fig. 3.)

The machine which was exhibited at Paris was sold to Hamet, the founder and publisher of the bee-journal, L'Apiculteur, for the small sum of $5.00. Hamet, who was not at all a progressive man, did not buy the machine for use, but only as a curiosity for his apiarian collection, and in mentioning this machine in his journal, he branded it as a "useless toy." Little did he think of the future that awaited this machine, in which he had no more faith than he had in the movable-frame hives, the only superiority of which, he said, was that they could be taken to pieces like a "puppet show."

I have reasons to believe that the exhibitor of these first extractors, Mr. Lessame, had bought the apiary and fixtures of Major Von Hruschka; for the latter, having resigned his position in the Austrian army when Venetia was ceded to Italy in 1866, sold his property in Dolo, and tried to earn a living by building a large hotel in Venice. Unfortunately, he met with ill-success, and died in poverty, after a number of

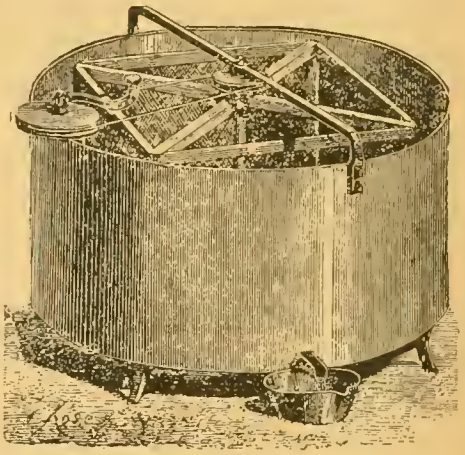


Fig. 3—Hruschka's Honey-Extractor.

years of sorrow and trouble. The unfortunate circumstances of the after-life of this man, who had rendered so great a service to the bee-keepers of the world, were not known until several years after his death, for he was modest and unassuming, and avoided speaking of his affairs. Had he taken a patent on his invention, instead of leaving it to others, he would have probably become rich.

As soon as it was published in bee-papers, many bee-keepers made use of the discovery, and manufactured centrifugal extracting machines. Mr. Adair, of Kentucky, followed the first idea of Hruschka, by making an extractor of two baskets revolving around a central pivot. Later, extractors were made in which the entire machine, including the can, revolved together.

Hamilton, Ill.

(To be continued.)

How Many Colonies of Bees Shall We Keep?

BY G. M. DOOLITTLE.

In Peter Henderson's "Gardening for Profit," will be found some statements of remarkable things done by those who are making land produce the largest possible profits per acre, and of late I have fell to wondering if a lesson could not be drawn from it for many of us who think we are on the right road to successful apiculture.

There seems to be a growing tendency, of late, to multiply our number of colonies, rather than to see how good results can be obtained from a few. In other words, we are using four acres of land, and expending more labor, to produce the same results which these men of thrift, mentioned in Mr. Henderson's work, achieve on their one acre. The question which arises is, Can, or cannot, the bees be worked on the same plan, so that 50 colonies will produce as good results, with less labor, than is gotten from 200 worked in the way many apiaries are worked? I believe they can, and think that the day is coming when one colony will be made to produce as good results as two are now doing, if they do not equal four.

All who have read those Australian reports of 800 to

1,200 pounds of honey from each colony, in large apiaries, on an average, will see that we are not up to our high privilege here in the United States. While not up to Australia, yet I find by a careful study of our own bee-papers that it is no unusual thing to see reports where 50 colonies of bees have produced 5,000, 6,000, 7,000, and even 8,000 pounds of honey, while I have yet to see a report quadrupling such where four times the number of colonies were kept. I oftener find that 200 colonies give but little if any better results than do 50, while I know that more work is required to care for 200 during a year, than is required for 50. To this work we have to add the extra expense of hives, sections, etc., together with the large amount of honey it takes to feed those extra 150 colonies. This last, in my opinion, is wherein lies the main trouble in making a large number produce as many pounds per colony as do a few.

From careful experiments and observations, I am led to believe that it takes at least 60 pounds of honey to carry one colony of bees through the year; hence, if we only get 30 pounds from a colony (an average yield that some bee-keepers tell me they are satisfied with), we get only one-third of the honey our bees gather, to pay us back for all our labor and capital invested; and also only one-third of the product of our field. This product of the field cannot be overlooked, as I have reason to believe, from past experience.

Quite a number of years ago I was enabled to secure an average of 166 pounds of comb honey from each of 67 colonies of bees, spring count, as the average result of a single season, and as honey sold at that time at 25 cents a pound, this caused a great excitement in my neighborhood, and many went into bee-keeping until I could count over 500 colonies of bees within a distance of two miles from my house, the result of which was a gradual lessening of the surplus honey per colony, so that little more honey in the aggregate was obtained from the 500 colonies than I obtained from the 67.

A few years later a hard winter reduced the number of colonies by about three-fifths, and the result was, that, during the season following, my average per colony was nearly 120 pounds of surplus comb honey, and the aggregate amount of surplus was about the same as from the 500. At 60 pounds of honey as food for a colony, it would take 30,000 pounds for 500 colonies. To this add a surplus of 15,000 pounds, which is about what was obtained where the 500 were kept, and we have 45,000 pounds as the product of our field, two-thirds of which was consumed by the bees.

The season after the hard winter, we had about 200 colonies on the same field, which consumed only 12,000 pounds for their wants, leaving 33,000 pounds as surplus. As the 200 gave about 120 pounds each as surplus, or 24,000 pounds in all, we had 9,000 pounds going to waste for lack of gatherers, thus giving 250 colonies as about the right number for our field, providing the field remains the same, and we allow that 120 pounds to be set down as a surplus with which all should be satisfied. I believe it possible that bees can be so worked that 200 pounds can be secured as a surplus from each old colony in the spring, in which case 175 colonies would be sufficient for our field. Now I candidly ask the reader if we had not better keep the number in our field at 175, thus securing 35,000 pounds of the 45,000 as a surplus, rather than keep 500 colonies and receive only 15,000 of the 45,000 pounds as pay for our labor, letting the bees consume the rest. In other words, can we not make a few bees do for us what the market-gardeners of the large cities make a small piece of land do for them, namely, secure as much profit from an acre of land as some of our country people do from their tens of acres?

Many an apiarist has allowed his bees to increase until he secured but little surplus from them, and then wondered why his bees were not as profitable to him as they were in years gone by, apparently not even dreaming that it took nearly or quite all of the product of his field to supply the wants of the bees as their board.

I know that the above line of reasoning cannot be made mathematically correct, yet there is in this thing a large and unexplored region well deserving of our best thoughts and efforts at this time of low prices, and, as a rule, small surplus. Who will be the first to work it out for us more practically than anything before done? Berodino, N. Y.

Suggestions About the Bee-Keepers' Union.

BY G. W. DEMAREE.

I want to suggest that the proper thing to do is to elect a new set of officers for the National Bee-Keepers' Union. I think a change, from time to time, is best for all such institutions.

Let all sentiment be laid aside, and let each member vote for some intelligent "bee-man" (our sister bee-keepers have a higher mission than is found in court decisions); properly distributing the number to be elected throughout the country as justly as is practically possible.

As to any change pertaining to "General Manager," that can safely be left to the judgment of the members. I can see no reason for any change in that respect, as the office of "General Manager" is hedged about by a board of directors—the President and Vice-Presidents. As one of the "old board," I shall positively decline to act in the future. I want to see a change.

Another thing I want to suggest. Too much money in the "treasury" is a temptation to *lawsuits*. I regard the Bee-Keepers' Union *a temporary concern*. When we have obtained from courts of *repute* a sufficient number of *decisions* to put bee-keeping on even grounds with other pursuits, each bee-keeper must then do his own "lawing." I have practiced the profession of the law, and know whereof I affirm. There is a specific stage of civilization that leads men to resort to the law as a mode of warfare against their enemies. No "union" should encourage that sort of civilization. This world—not this country alone—is becoming full of "unions" and "trusts," and "combines," and "societies," of every earthly description, and there is a cataclysm ahead! or the "watchers" of the "signs of our times" are mightily mistaken.

Christiansburg, Ky.

[Right in line with the foregoing suggestions by Mr. Demaree, comes the following:—EDITOR.]

Officers of the National Bee-Keepers' Union.

BY FRANK BENTON.

Heretofore, when voting for officers of the Union, I have felt myself quite in the dark, as no candidates had been named, and even in some instances I did not have a list of the members of the Union from which to choose. Thus, however excellent a man might be named in my ballot, it is very possible the vote would be thrown out because the man was not a member of the Union, or it might be lost, practically, simply because no one else, or but few others, happened to choose the same candidate.

Believing that many other members have also found themselves in the same dilemma, I propose to present the names of a few of those for whom I would be willing to vote, and at the same time suggest that other members who see a possibility of improving the nominations by the substitution of other names, or the naming of an entirely distinct ticket, should send on their nominations at once, so they will appear before the voting-time closes.—Jan. 31.

We want men who occupy no equivocal position on the question of honey-adulteration, in whatever form that evil of

our industry appears, and also such as are thoroughly identified with the apiarian interests of the United States. While feeling certain that there are, among the members of the Union, many who would come up to this standard, and who at the same time possess such a knowledge of business methods and of the law as would also be of use to the Union, one is obliged to restrict himself to seven names. I give, therefore, the following:

For President—Hon. R. L. Taylor, of Michigan.

For Vice-Presidents—P. H. Elwood, of New York; Eugene Secor, of Iowa; Chas. F. Muth, of Ohio; C. P. Dadant, of Illinois; and G. W. Brodbeck, of California.

For Secretary and General Manager—Thomas G. Newman, of Illinois.

Washington, D. C.

More Kinks—Fumigating-Torches, Etc.

BY F. L. THOMPSON.

I am about to commit a most heinous sin—recommend an article I have not tried. My excuse is, I may never have the opportunity, as we are not troubled with moths here, to speak of. Some manufacturing chemists make what they call "sulphur torches"—one-pound cylinders of brimstone, about two inches in diameter, molded like a candle, and furnished with a wick. They cost 25 cents each, and are accompanied by a fire-proof box. They are said to burn twelve hours without attention, and leave no residue. I presume they put something in the sulphur to make it burn readily. This should be something for the supply dealers to get hold of, and handle among their many other conveniences for the bee-keeper.

SOMETHING ABOUT TIN CANS FOR HONEY.

It is commonly said that the 60-pound square can is *the* package for extracted honey. For shipping purposes it is, and when very small ants are troublesome; but for all other purposes I have found the 72-pound six-gallon round can (commonly known as "the 50-pound lard can") away ahead. This can is entirely open at the top, with a cover. It costs about 30 cents new, but I get all mine second-hand at a bakery for 10 cents each. It is less trouble to run honey in, and get it out; and for the scientific liquefying of granulated honey, there is no comparison between the two cans. A neighbor bee-keeper, Mr. Frank Rrauchfuss, says that by punching two holes, at the same distance from each other, and from the sides of the vessel, clear down to the bottom of the granulated honey, it melts much sooner, and does not have to remain long on the stove; even a low heat, when long continued, being liable to color it. I would suggest a butter-tester as the neatest tool for the purpose, but a clean broom-stick would do.

BOILING HONEY TO LIQUIFY IT.

Apropos of this, I must criticise Mrs. Atchley for saying, on page 557 of the Bee Journal for Nov. 1, 1894, in reply to a questioner, "I am of the opinion you boiled your honey too much:" though the instructions she goes on to give are unexceptionable. But by expressing it that way, it might be implied, first, that the honey itself could be boiled a little without injury, which I don't believe; second, that the water surrounding it could be allowed to boil, which I don't believe either, as I colored some honey, though the honey-can was placed in a double water-can, and only the outer layer of water boiled. Since then, I have used a thermometer, and never let the water adjoining the honey get much over 140°, and had no trouble.

WAX-RENDERING IN IRON VESSELS.

And while I am making criticisms, I will refer to the instructions of Dr. J. P. H. Brown, on page 400, for rendering wax. He says: "A large *iron* pot, water and a bag properly worked, are the best for the business. The wax comes out bright and yellow." Now, I always understood that iron vessels darkened wax. I have darkened some myself, in fact, by using a pan which had the tin worn off. How is it about that? It may be that pure iron has no effect, and that oxide of iron (rust) does the business; but if so, the statement has not been made before.

THE ROUND CANS FOR HONEY, ETC.

To return to the subject: The six-gallon round can has the additional advantage that it can be used for other purposes around the apiary besides holding extracted honey. When transferring, or cleaning off brace-combs out-of-doors, it is just the thing to dump odds and ends of comb into; it can be covered up in an instant from robbers, and afterwards the broken honey or wax disposed of at leisure. A 10-cent can is cheaper than a special wash-boiler for rendering wax. They make good receptacles for cappings, too. Instead of having a special funnel made, as directed in Doolittle's "Scientific Queen-Rearing," bees can be shaken off into one of these cans, and "boxed up" for a few hours until they "mourn," at one operation, in which case it might be well to punch some small holes in the cover.

For the temporary reception of sections, these cans are sometimes handy, always being bee-proof; each one holds 30 sections. Two of them setting permanently in the center of the apiary, one holding planer shavings, and the other the smoker, matches, oil-can and chisel, are a great convenience, as they are rain-proof. And, finally, a pair of shears converts them into those various tin strips not infrequently used by the bee-keeper.

I can also commend the article to Rambler as worthy of introduction among California bee-keepers. Many a fine young fellow has been worried into wedlock by fancied inconveniences, only to find when too late that in that respect he has jumped from the frying pan into the fire. When the tired bachelor enters his cabin at night, and steers straight for the easy-chair, or its equivalent, he is apt to stumble over piles of things which on previous occasions he had "chucked" out of the way, which piles, moreover, have an inconvenient tendency to accumulate at the bottom those articles oftenest used. This is a little wearing, of course (though not as much so as some have made out), but can be entirely obviated by some sort of distributing apparatus to receive the "chucked" articles, such as a generous quantity of shelves on each side of the room, and six or eight of the cans referred to, for the eatables, and dirty dishes which will be washed "next time." Mice will soon be starved out. Then what a bore it is to hunt out Sunday clothes in a double-decker trunk! A few of those cans will hold them just as well, and specialize them besides.

THE PENT-UP WRATH ESCAPES!

I have been nursing my wrath against Dr. Peiro for a long time, and can wait no longer, but propose to pitch into him apropos of nothing. Was it a mistaken idea of chivalry, or professional urbanity, or what, that made him say on page 172 of the Bee Journal for Aug. 9, 1894, *ladies* should do so and so, and *men* do something else? Would he have said gentlemen and women? It made me as mad as to see a notice of a "grand" free lunch, or to be asked to buy a "nobby" article.

Don't let it happen again, Doctor. But those little articles of yours are "daisies."

Arvada, Colo.

The Mission of Birds and Bees in the Orchard and Garden.

Read before the Iowa State Horticultural Society, Dec. 13, 1894.

BY HON. EUGENE SECOR.

Did you see that house-wren fly to her nest in the woodshed with a worm in her mouth? That's the twelfth time she has done the same thing in the last hour.

"How many babies has she, and what is the capacity of their unregenerated appetites for these dainty morsels of vegetarian nastiness?"

Well, ordinarily she hasn't more than six or seven infants at a time to feed, but it takes a good many worms to make a pound of bird-meat, to say nothing of the feathers which are probably more expensive than the birdling itself; and as this seems to be their exclusive diet during their babyhood, a moderate estimate of the daily consumption of worms in a bird family of usual numbers and average appetite is several hundred. And as she generally rears two broods in a season, who can estimate the value of even one pair of these little chatter-boxes?

And what a cheerful song they give us! They are the sure harbingers of spring. Their sprightly movements and cheery notes assure us that the winter of our discontent is past. They bid us enter upon the summer campaign with joy and hope. The confidence with which they come to our homes and claim our protection gives them at once the right of way to the best quarters we can furnish, and makes us better men and women by reason of their association. So insignificant in size, and sober in color, they seem to have almost escaped the vengeance of the small boy, and the rapacity of the grown-up barbarian. They make friends of every one they meet because of their cheerful disposition, good habits, and the absence of all bad qualities. They come as near being perfect in the eyes of the practical gardener and fruit-grower as any bird that visits our Northern climate. It is hardly necessary to intercede in their behalf, or to suggest that a safe nesting-place be provided away from the wily old cat.

And there's that pair of robins with their nest in the old apple-tree. About the first thing heard in the morning is the call to duty by these early risers after the proverbial worm. Before the peep of day they grow restless from hunger, or habit, or the pleading uneasiness of the baby squabs that have gone without a morsel to eat for one-third a calendar day. It is a race of the earliest and the swiftest for the unlucky vermicule that has allowed its appetite to get the better of its judgment, and has neglected to retire to a safe retreat before the early dawn. And its name is legion. But thanks to the young nestling with its mouth always open and its assimilating powers seldom overtaxed, the hordes of creeping, crawling and flying foes that prey upon the vegetable kingdom are held somewhat in check.

The birds named are only two out of a large number that wholly or in part live upon the enemies of the orchardist, the gardener and farmer. Does any one doubt the helpfulness of birds in holding in check the swarms of destructive insects, worms and bugs that harrass us? They would soon overrun the country like an Egyptian plague but for these friends of ours, ever vigilant because always hungry.

What if they do occasionally levy a slight tribute on our ripe berries? Can we dispense with their services? And think of their almost endless woody concerts! What compensation is adequate to such unparalleled variety and melody, that, like the blessed sunshine, falls upon the poor and rich alike? Shakespeare said—

> "The man that hath no music in himself,
> Nor is not moved with concord of sweet sounds,
> Is fit for treasons, stratagems and spoils."

And he that hath no music in his soul for the songs of birds, and no appreciation of the poetry of bird-life, but who can wantonly slaughter these migratory, heaven-sent, operatic bands, ought to be banished to the farthest coast of Nova Zembla until the heavenly melody of God's sweet songsters could penetrate his callous heart.

The crime of destroying our song-birds, or any others, for the purpose of supplying the demands of fashion ought never to be condoned. Their blood, like the blood of Abel, ought to cry out from the ground against such sacrilege. Or, like Banquo's ghost, they ought to haunt their slayers and users "to the last syllable of recorded time." If the butterflies of fashion ever want the ballot, they must first compel the men to respect their attire as well as their person and attainments.

* * * * * * * * *

The usefulness of bees in the economy of nature is too well known to need any special pleadings from me.

The natural inference to be drawn from their well-known habits establishes the theory that the chief purpose of their existence is the pollination of flowers. The collection and storing of nectar is secondary. Every observing person who has given attention to the matter has noticed that bees visit only one species of plants at a time. They do not go promiscuously from one kind to another. If they are working on apple-blossoms they stick to apple-blossoms so long as there is anything to be gotten from them. They do not go from apple to plum, from raspberry to clover, from dandelion to willow. So averse are they to change that they frequently continue on a certain kind after it ceases to be profitable for honey.

One reason for this, it may be, is that they do not like to mix their honeys, but I do not think that the chief one, because I find cells partly filled with the finest honey in the world—clover or linden—completed with a dark-colored product from buckwheat or other fall flowers. But it is an evidence to me that they were created to pollenize flowers, and that they work along lines made for them by Superior Wisdom.

Charles Darwin proved by years of painstaking experimentation that plants grown from seed produced by the union of distantly related plants of the same species were more vigorous than those fertilized by their own pollen-dust, or by that from plants near at hand and grown under the same conditions as to soil and treatment. His deductions were that close in-and-in breeding tended to lack of vigor and inferiority.

This, then, is the mission of the bees: To carry the pollen-dust from one flower to another, and the small amount of nectar found usually in each individual blossom often compels them to fly quite a distance before securing a load, and hence plants widely separated are married by the bees. Another fact quite well established is that the pollen from a distant relative is prepotent. So the bees are continually crossing one variety of a species on another. And probably all, or nearly all, of the American fruits which we know and prize are the result of these chance crosses. While man with his puny camel's-hair brush is making feeble effort to breed fruits according to a theory—perhaps a hundred miles apart—these tireless little marriage-priests are accomplishing a much greater work, unheralded, unknown and unappreciated. Where we by our scientific methods evolve *one* new variety, they, by a method older than science or civilization, create hundreds.

What does our brush and pincers and paper-sack amount to, compared with God's cross-fertilizers?

I know it is maintained that bees are not necessary to a crop of fruit: and the facts are cited that we had fruit in this country before we had bees. I concede all this. There are other ways of carrying pollen than on insect legs and bodies.

Nature does not put all her eggs in one basket. She is lavish in her provisions for multiplying species. Look at the bushels of pollen that fall from evergreen forests—not a thousandth part of which is ever used. Look at the millions of particles of pollen-dust that go to waste in every cornfield.

That the wind plays an important part in transporting pollen-dust I have no doubt, but experience and observation have convinced me that the wind can be depended upon only within very limited distances. For example, in planting pistillate varieties of strawberries, it is necessary to intermix polliniferous plants quite liberally if we wish good crops. Now bees seldom work on strawberry blossoms. I think the wind is the chief agent in pollination. The same is also true in all the conifers and nut-bearing trees. But with most of our fruits bees are an active and beneficial agency in fertilizing the flowers. And with some varieties they are actually necessary, unless the trees are planted so close to some other sort which yields an abundance of pollen that they can be readily fertilized by the wind.

Mr. Darwin, in his "Cross and Self Fertilization," gives a list of plants, 65 species, that are either entirely or nearly sterile without insect aid. And, by the way, our white and red clovers are among them. Only kinds were experimented with that produced both stamens and pistils on the same plant, or, in other words, were perfectly adapted to self-fertilization so far as appearances went. Of course this number of species is only a fraction of the whole number, and constituted about half of the number experimented with. And is it not a fact that in all our hardy native fruits, almost without exception, there is a more abundant supply of pollen than in our imported or highly-organized sorts of the best quality? It must be remembered that all our improvements in the list of fruits are sports. And when we find a new thing of high flavor or attractive appearance, we propagate it whether it has all the hardy reproductive qualities of its ancestors or not. I have an opinion that all through nature *quality* is developed at the expense of vigor and productiveness. Civilization seems to be developing in that direction. Stock-breeders do not need to be told of the fact. Florists have so highly developed the rose that it has scarcely any pollen—and I am not sure but some kinds are so double they are entirely destitute.

If it be true, then, that the finer our fruits the smaller the quantity of pollen, and therefore the greater risk of pollination by atmospheric action, the more we shall need in the future *all* the agencies for fully and abundantly pollenizing them. One of the practical methods of accomplishing this is by the aid of the well-known honey-bees.—Forest City, Iowa.

The Sunny Southland.

CONDUCTED BY

MRS. JENNIE ATCHLEY, BEEVILLE, TEX.

A New Year's Greeting.

Dear friends, I wish to thank you for your many kind letters and kind words during 1894, and now, as the New Year dawns, I wish to greet you with a New Year's smile, and wish you *all* a Happy 1895, and trust you may all reap a good honey harvest this year.

We are very busy just now (Dec. 20), as our bee-meeting is almost at hand. But I feel that I *must* take time to thank one and all for your kindness to me in the past. It seems to me now that nearly all my time is taken up entertaining bee-keepers in some way, and I feel more and more attached to bee-people as the years roll by. I can pass time more pleasantly in company with bee-keepers than with others, and this is why I feel more attached to them.

I wish to make my department more entertaining this year than ever before, and ask the assistance of *all* my bee-friends in making "The Sunny Southland" what it ought to be. Now, that the "Old Reliable" is going to be greatly improved, I must also improve my department. Send in your questions, and all the good matter you can, and I will answer and discuss all bee-matters in this department.

Again I thank you, and wish all a prosperous 1895.

JENNIE ATCHLEY.

Bee-Keepers Arriving at Beeville.

This is Dec. 20, and the bee-keepers are beginning to arrive. Mr. C. B. Bankston and two sons, of Chriesman, Tex., came last evening; and F. A. Lockhart, of Lake George, N. Y., came this evening. All seem favorably impressed with Bee county. A full report of our bee-meeting will appear in my department soon after the meeting. We are having lovely weather, and bees are gathering honey from black chaperal, which is just now beginning to bloom.

JENNIE ATCHLEY.

Flowers from Australia—The Bee-Bulletin.

We have just received some flowers from Australia, sent by Mr. E. Tipper, editor of the Australian Bee-Bulletin. One is blondwood, the other mahogam—both native Australian plants, and, I suppose, good honey-yielders.

By the way, have you noticed what an interesting journal the Australian Bee-Bulletin is? I tell you, I believe if we had our bee-meetings oftener, like they do in Australia, it would be helpful to us. The Australian Bee-Bulletin is a well-printed and well-gotten-up journal, and seems ever alive to the interest of its readers. It comes monthly, and has about 36 pages each issue. May it prosper, and be well patronized by the bee-keepers of Australia and other countries.

JENNIE ATCHLEY.

Those Bee-Lessons—Transferring Bees.

I will continue my lessons soon after our convention report is all published. Also, I have in store for you our visit to the bee-keepers of Brazoria county.

We are transferring bees this beautiful spring-like weather—Dec. 21—and some of our bees are rearing brood right lively. But we will put a stop to their brood-rearing as soon as a few young bees are hatching, as they would use up all their honey if left to do as they wished to do. We will cage the queens if breeding does not stop, as we do not want bees at this time of the year. But unless we have some colder weather, our honey-bearing plants will be in full bloom, and then we will be ready to harvest the honey. Our bees, with few exceptions, are in fine condition for winter, and if we can keep down breeding, they will be all right.

JENNIE ATCHLEY.

The Bee-Bulletin Calls It "Meanness."

Do you keep bees? Then of course you take the American Bee Journal. The following I found in the Australian Bee-Bulletin:

"Oh, no, I always see it, though; Mr. So-and-So takes it, and he lets me look it over always." Such a conversation actually took place in one locality lately. One party was mean, and the other thoughtless. What show is there of improving a paper, or even of keeping it up to its present standard, with many such people?

Now, this is really too bad. I know it is your privilege to borrow your good neighbor's journal, as well as his other necessities, but all bee-keepers in the South who do not take the American Bee Journal already, just send to me your subscription for it, and I will promise you we will endeavor to please you, and make you feel well repaid for the dollar, and at the same time enable the "Old Reliable" to move out on the line of progress and improvement. During these long winter evenings, rake up items of news and bee-notes of interest, and send them to me, or to Editor York direct, and we will be glad to publish them. Remember, the "Old Reliable" is strictly a *bee*-journal!

JENNIE ATCHLEY.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

When and How to Transfer Bees.

1. At what time during spring or summer would it be more suitable to transfer bees from the old-style box-gum into frame hives?

2. Can I transfer them in time to get a full crop of comb honey the first season?

3. In transferring, is it best to transfer a part, or all, of their brood-comb (from the old gum) into the frame hive, or simply give them comb foundation to start brood anew?

Reynoldsville, Ill. C. H. S.

ANSWERS.—1. The time generally taken for transferring is fruit-bloom.

2. If done in good shape, it ought not to put the bees back, and, indeed, in some cases you may get a larger crop the same season than if you had not transferred them. For, as a general rule, in box-hives a good deal of drone-comb will be found, and an inch of drone-comb means a good deal more than an inch of honey lost.

3. As a rule, none but good, straight worker-comb is transferred, but no brood should be wasted.

Before doing much transferring, it will pay you to get a good text-book and read up.

The Standard Langstroth Frame.

What is the length of a standard Langstroth frame? I have 17⅜ inches, according to "Langstroth on the Honey-Bee," before Dadant's revision, and as a hive has, that I got from Mr. Heddon 10 years ago, from which all mine have been made. The dovetailed hive, I believe, has frames 17⅝ inches long. There cannot be two "standard" lengths of any

one thing. In Query 950, the answers, or most of them, say: "The standard Langstroth frame," as though there was only one length.

The reason I ask is, that next year I may get more hives, and as the dovetailed is the best way to make them, I should probably get them, but I do not want, and would not have, two sizes; but I want the standard, whichever it is. T. T.

ANSWER.—In the fullest sense, I suppose any movable frame is a Langstroth frame, as the principle is there. The original Langstroth frame was, however, 17⅜ inches long. Then they were made 17⅝ to accommodate the size of sections, and this size, which is sometimes called "Simplicity," and sometimes "Langstroth," I suppose, would really be called the standard size, as it is, I believe, the one in most general use.

Arranging a Bee-Shed for Winter.

Thinking to winter my bees to good advantage, I built last spring a shed, closed on the north, east and west sides; also on the south to within 3 or 4 feet of the ground. I can close it clear to the bottom in front, or the south side.

1. Will it be better to leave it open in front, with the hives well back, or had I better close it entirely when settled cold weather comes?

2. As I can arrange to pack between and back of the hives with straw, would it be advisable to do so?

Sharpeye, Ohio. H. M. S.

ANSWERS.—1. I believe I would leave it as you have it, so that the sun may shine in when there comes a warm day.

2. I think it would be a good thing, so long as the packing does not interfere with the hive-entrances.

Feeding in Winter—Transferring, Etc.

1. How can bees be fed in box-hives at this time of the year?

2. Can bees winter with only a few bees on the combs now, and no honey in the hive, if they are fed?

3. Is it better to transfer bees from box-hives to frame ones now, or wait till spring?

4. Can all worker-bees lay eggs? Do they lay worker or drone eggs?

5. Does the queen lay all the eggs?

We have had a very poor year for honey. The bees gathered some early in the spring, but none since. They are starving to death in this country. I have a few colonies in box-hives. They are very weak, and have no stores. I would like to carry them through the winter. Please give me the best advice you can on the matter. J. T. S.

Buckeye, La.

ANSWERS.—Although you don't say so, I suspect that you want your answers in the American Bee Journal. I heartily wish that each one asking questions and desiring answers in this journal would say so, as I can't tell whether you may not be a reader of another paper to which I send replies.

1. It depends a little on circumstances, what may be the best way. If the weather is warm enough, all that is necessary is to put some honey or some sugar-candy under the bees and they will take it up. But the candy will not work so well under the bees as honey, for it may be too dry. It isn't well to feed syrup in winter. If it's too cold for the bees to come down to the bottom-board, then you can turn the hive upside down, lay the honey or the candy on the combs, and cover over so the weather can't trouble, but don't cover so close as to smother the bees. The first warm spell that comes, you can turn the hive right side up.

2. I wouldn't give much for their chances, and I would not give much for the outfit if they should pull through.

3. Better wait till spring.

4. I don't know. The latest opinions rather tend toward the belief that when circumstances are right to develop laying-workers, that any worker may develop into a laying-worker.

5. In a colony that's all right, the queen lays all the eggs.

Perforated Zinc or Wire-Screen Separators.

Have you, or anybody else, used separators made of perforated zinc, or wire-screen, with meshes so big that the bees could go through? I have been thinking of trying some experiments in that direction, as I think there is some advantage in it; but I thought of it too late to try it this year. I will try it next season. O. G. R.

Lake Mills, Iowa.

ANSWER.—Yes, some years ago they were heralded as a great improvement, and I believe were patented, but as they sunk out of sight I suppose there was no great merit in them. I commend your judgment in first asking about such things before going to any great expense. Thousands of different things have been tried, and it would be well for those who think they have some improvement to first ask whether it is anything new.

Basswood Division-Boards Warping.

I have some nice basswood lumber, half-inch thick, that I would like to make division-boards of for brood-chambers. Will it make good division-boards? or will it warp by the heat of the bees, or from any cause? L. E. E.

Onsted, Mich.

ANSWER.—Basswood, or linden, is one of the worst woods to warp. But you can manage it in this way: Cut the division-boards an inch short, then nail on each end a strip half an inch wide. Indeed, I would have some kind of strips on the end, no matter what kind of wood is used.

Doctor's Hints

By DR. PEIRO, Chicago, Ill.

Not a Fool.

No, sir, Mr. Jones; you are in error to suppose that your boy lacks ordinary intelligence just because he has what you describe as "that far-away look." You don't know, and cannot imagine, what thoughts are going on in that brain of his. He may greatly surprise you some of these fine days by his original thoughts or works.

I more than half suspect, from your letter, that you have done him the great injustice of frequently expressing your conviction to him, that you consider your son little better than an idiot, until psrhaps he has almost become persuaded that your estimate of his intelligence is correct! Many a boy and girl have been mentally ruined by such heartless presumption. The fact that your son is not particularly interested in your farm work, and the various drudgeries it entails, is no evidence that he may not be intended by Nature for some vocation in life just as good or important as a farmer. Many a boy, reared on a farm, has become the greatest of useful citizens.

"Film" on the Eye.

Well, Mrs. Whitman, I wouldn't take so gloomy view of the case. A thick film on the eye, even in a person of your years, does not necessarily portend total loss of sight. A practical opinion must depend upon a thorough examination. But what you call a "film" on the eye may really be a thickening of the round center of the eye—the cornea, doctors call it. I don't mean the little spot in the very center, but that part by which you decide the color of one's eyes. If it is thickened, perhaps little can be done, but it may be that only the thin membrane covering it is thickened, as the result of inflamation. In that case a cure is almost certain. So don't give up.

Use a lotion made of 20 grains of boracic acid and three ounces of camphor water—a few drops put into each eye five or six times a day. It doesn't pain. It will do no harm if the case is of the hopeless kind, and is pretty certain to make you well if it is of the nature last considered. Try it, anyway.

A B C of Bee-Culture—just see the magnificent offers on page 15. Every one of our subscribers can now have a copy of that splendid book

OLDEST BEE PAPER IN AMERICA — ESTABLISHED IN 1861

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MRS. JENNIE ATCHLEY - - - "THE SUNNY SOUTHLAND."
"GLEANER" - - - - - "AMONG THE BEE-PAPERS."
"BEE-MASTER" - - - - - - "CANADIAN BEEDOM."
DR. F. L. PEIRO - - - - - "DOCTOR'S HINTS."

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Editorial Comments.

Now for 1895.—The brand new year is begun. The old American Bee Journal has donned its new-style suit of clothes, and again wishes you "A Happy New Year!" It comes to you as a silent friend, yet would speak to you in words that help, cheer and encourage. It desires to express the hope that the New Year may bring to all its readers sweet peace and honied plenty. That though storms may assail, and drouths destroy, yet there's nothing to be gained in gloomy forebodiugs and depressed imaginings. Cheer up, then! Let all be determined to make 1895 the best year of their lives. Let it be understood that, come what will, bee-keepers will bravely press onward, and *deserve* success, whether it be theirs or not.

Among the Bee-Papers, on the opposite page, is a new department, in charge of one who is styled "Gleaner." It will be "Gleaner's" aim to "boil down" the other bee-papers, and crowd into that department all their newest and most valuable ideas. In fact, "Among the Bee-Papers" will save you a heap of time, as "Gleaner" will read *all* the other papers, and present to you, week by week, the rich, thick "cream" which results from careful "skimming." Keep your eye on "Gleaner," and see what a good "skimmer" can do.

The 35th Year of the American Bee Journal begins with this number. It is just a trifle older than its editor. Few periodicals can say that. But while age does not always carry with it strength, nor youth at all times indicate vigor, still I trust that the American Bee Journal may from year to year become stronger and more vigorous in its ability to furnish unexcelled weekly apicultural information to its readers, both near and "in earth's remotest bounds."

I desire to sincerely thank all who have so kindly aided me by their apiarian contributions, and by kind and encouraging words and help, since I have endeavored to guide the "Old Reliable" ship—now a little over two and a half years. I trust that my past mistakes may be overlooked, and that in the future I may be enabled to avoid the rocks that at times I have struck upon while trying to navigate beedom's channel of progress.

With new sails unfurled to the clear breezes of 1895; with stronger editorial hands upon the helm; and with a firmer determination than ever to "go forward," the old American Bee Journal ship invites everybody to "get aboard" for another twelve-month voyage.

Not a Bit Discouraged.—In a letter received from Mr. B. Taylor, of Forestville, Minn., dated Dec. 17, I read these words:

> Bee-keeping was never in such a low condition here as now, but it will boom again in time. I shall stick to the bees with greater zeal than ever. I am having the happiest experience of my life now in my 66th year. Your friend,
> B. TAYLOR.

There is something very refreshing in the above. The right kind of stick-to-ativeness is exhibited. The people who are jumping from one thing to another are the ones that never succeed. I am glad Mr. Taylor is leading off in the right way. Though in his 66th year, he's more determined than ever to make a success of bee-keeping. He's happy about it, too. And he will win! His name is B(ee) Taylor.

Mr. T. promises to send in his report soon for the past year.

Canadian Beedom, which is begun in this issue of the American Bee Journal, is mainly intended, as its name indicates, for readers living in Canada. But if any other folks fail to read "Bee-Master's" department, it will not be his fault that they miss something helpful and instructive. Canadian readers are invited to contribute their apiarian "mites" or "kinks" to the new department, and to help make it superior in quality to their wonderful basswood (no—*linden*) honey—if such a thing be possible.

Why not have a little innocent rivalry between the departments conducted by Mrs. Atchley and "Bee-Master?" They are far enough apart to be equally fair, and so that no destructive collision could well occur. Besides, I'll see that no harm results. Now for the rivalry of apicultural intelligence!

The Production of Extracted Honey will be explained in detail by Mr. Chas. Dadant, in a series of articles, the first of which is published in this week's Bee Journal. Mr. Dadant has no superior as a producer of extracted honey, he and his son (C. P.) having harvested over 40,000 pounds in a single season. I want to invite a careful reading of Mr. D.'s extracted honey articles, particularly by new subscribers, as no mistakes will be made if they follow implicitly Mr. Dadant's directions, which are the result of several decades of practical experience with bees.

Other articles of the series will follow at intervals of at least each alternate week, until completed.

Paste for Sticking Labels on Tin.—In the January number of Demorest's Family Magazine are given a number of recipes for making various kinds of cements or pastes. Among them I find the following, which are recommended for fastening labels on tin—something that bee-keepers need when they come to labeling their tin receptacles for honey:

No. 1.—Soften glue in water, then boil it with strong vinegar, and add sufficient flour to make a paste.

No. 2.—Four ounces of rye flour, ½ ounce of alum, and 8 ounces of water. Mix into a smooth paste, and add a pint of boiling water. Cook until thick, then add one ounce of glycerine and 30 drops of oil of cloves.

Comb Honey Production will be treated of in a series of articles beginning with next week's Bee Journal, by Rev. E. T. Abbott, of St. Joseph, Mo., ex-President of the North American Bee-Keepers' Association. It is intended to alternate these articles with those on extracted honey production by Mr. Chas. Dadant, referred to in another paragraph. It will well repay every reader of the American Bee Journal to preserve all the articles by Messrs. Dadant and Abbott, for future reference. These two series of articles alone will be worth many times the price of a year's subscription to the Bee Journal.

Mr. C. P. Dadant—whose picture, in connection with his father's, is found on the first page of this number of the American Bee Journal—is a man well known to the bee-fraternity, yet a few facts concerning his life I am pleased to give here, as I know they will be read with much interest by all:

Camille P. Dadant was born April 4, 1851, at Langres, France. He is therefore about 44 years of age. At the age of 12 he emigrated to this country with his parents, and has ever since lived on the homestead in Hamilton, Ill., which they occupy at present.

In 1874 his father took C. P. into partnership with him, and he

has since that time been the business manager of the firm. He was married in 1875, and now has a family of six children—three boys and three girls—the oldest of which is 18 years of age, and the youngest four.

He took an active part in the revision of the book of Langstroth, which occupied his father's time for three consecutive winters. In addition to the management of their foundation factory and supply business, he overlooks the care of five apiaries, and superintends a large vineyard and a wine-cellar, making the wine after the manner of their old home in France, which was situated on the confines of Champagne and Burgundy.

Mr. Dadant, junior, is intimately connected with the growth and prosperity of the little town of Hamilton, near the outskirts of which they live. He is one of the founders of their Loan and Building Association, and has been one of the Directors of that Association since its beginning. He is also Vice-President of the State Bank, in the same town. The town has a bright outlook for the future, being situated on the DesMoines rapids of the Mississippi river, which are shortly expected to be used as a water-power of colossal dimensions.

I gave an old picture and short biographical sketch of C. P.'s father—Mr. Chas. Dadant—in these columns in 1893. The two engravings shown on the first page, were made from photographs taken last month, and especially for use in this number, at my request.

Rev. E. T. Abbott, ex-President of the North American, is in great demand now-a-days in his own beloved Missouri. After having lectured at farmers' institutes for several weeks the past fall, Secretary Rippey, of the State Board of Agriculture, has invited Mr. Abbott to also deliver a series of lectures soon on Apiculture, before the class in Agriculture in the State University at Columbia. This will be a good thing for bee-keeping in Missouri, and all over the country, as well, as it will no doubt attract the attention of the boards of agriculture in neighboring States, and lead them to do the same thing.

Missouri bee-keepers are fortunate in having so good a friend on their State Board as Mr. Rippey. He has also asked Mr. Abbott to prepare a condensed report of the North American convention held at St. Joseph, to be used in the next Report issued by the State Board of Agriculture. Some of the essays read at the convention will appear in full. In fact, Mr. Rippey has left it to Mr. Abbott to say what is best to be included, and that means that a good report of the North American will be furnished him. It will help the bee-keepers of Missouri to have it published in connection with the Board of Agriculture Report.

Two Copies of this Number of the American Bee Journal may be received by a very few of its regular subscribers. If so, it is a mistake, and I trust that should any one receive two copies, he or she will be kind enough to hand the extra copy to some bee-keeping friend. Possibly in many cases a new subscriber may thus be secured. An edition of 10,000 copies of this number is printed, in order to have some extra copies for use as samples. Any desiring such for use in trying to get new subscribers, will be gladly supplied if they will simply send in their requests. All subscriptions for some time will begin with this number, so that each subscriber will have a complete volume from Jan. 1, 1895 to Jan. 1, 1896. The index will be printed in the last, or 52nd, number of the year.

Among the Bee-Papers

Conducted by "GLEANER."

FEEDING IN SPRING.

Wm. McEvoy, in the Canadian Bee Journal, advises against *early* spring feeding, while strongly favoring later feeding under certain conditions. He says:

"The stimulating of my colonies by feeding them in *early* spring broke the cluster, excited the bees and caused them to fly too much in unsuitable weather when there was nothing for them to gather. By that sort of work I weakened many a good colony and then learned by experience to let all colonies carefully alone in spring until the bees began gathering honey from the willows, wild plum and other early honey-producing trees."

After that time he favors uncapping the sealed honey, especially when a time comes that on account of bad weather or lack of forage the bees are bringing nothing in. At such times, with plenty of sealed stores in the hive, the larvæ will be partially starved if no *unsealed* stores are present, and the hatching bees will wander over the combs not finding enough to eat.

THAT NORTH AMERICAN REPORT.

The long-drawn-out report of the St. Joseph convention begins to have holes in it as if some parts had dropped out. For example, Dr. Peiro says, "Mr. Richardson tells me something that is entirely new to me;" but on looking back, one cannot find what was said. Mr. Holterman says, "What I said, I said in a sort of joking way;" but you can't turn back and find the joke. Has that report gone through so many hands that some pieces have been lost, or has it hung fire so long that some of the writing has faded out? Possibly it might be a good plan for the "Old Reliable" to return to its usual way and publish its own report.

CONTROVERSY ON FIVE-BANDED BEES.

A lively skirmish is taking place in the Progressive Bee-Keeper over these undoubtedly beautiful insects. Chief disputants, Jennie Atchley and Editor Quigley. The latter backed by S. E. Miller, who says: "For the last three or four years, the glory of the golden five-banded Italian bees has been rising up the eastern horizon. It has now passed its zenith, and is fast sinking low in the west."

Bro. Quigley says yellow queens and bees can't be produced from imported stock. Mrs. A. doesn't agree. She says, "I have reports on the five-banded bees this year that would knock out all other bees." He says, "These testimonials are given in a short time after the queens are received, and not one in 20 has any bearing on honey-gathering qualities of the bees." Mrs. A. says the five-banded, like other bees, have their faults, but asks that Satan be given his dues. To this Bro. Q. replies, "The devil seems to be O. K."—an endorsement the latter gentleman doesn't always get. Wonder if they are talking about the same thing, after all. Because a man with yellow hair stole a horse, it doesn't follow that all golden-haired men are horse-thieves.

ESSAYS AT BEE-CONVENTIONS.

There seems to be quite a little stir lately about the matter. Several have objected particularly to long essays, the ground being taken that essays should only be used to introduce discussions. But no less a person than President Abbott has come to the rescue, and in Gleanings he defends the essays on the ground that they serve as an advertisement, for the daily papers will print them and will not print the discussions. And now I suppose some of those objectors will be just unreasonable enough to arise and ask how much more honey was sold in St. Joseph because of the publication of an essay on bee-keeping in France, in the papers of that pleasant city.

PHILOSOPHY OF PERCOLATING FEEDERS.

Dr. Miller, in Gleanings, philosophizes upon some experiments he has been making, and seems rather to come to the conclusion that after all percolating is not the essential part of the percolators. According to his reasoning, anything will answer that will hold the water long enough to dissolve the sugar, and at the same time will allow the syrup to escape only at the bottom. In that way the heaviest part of the syrup will always be going to the bottom, while the thinner and lighter portion remains at the top, dissolving its share of the sugar as it slowly sinks to the bottom.

IMPROVEMENT IN HIVE-COVERS.

Of late, flat covers have been quite popular with a good many bee-keepers. They are lighter and cheaper than others, but have the bad habit of warping and twisting, no matter how tightly clamped at the ends. The "Higginsville cover," gotten up by the Leahy Manufacturing Co., is quite an improvement. Being made of two pieces with a ridge board they are comparatively free from twist, and being thinned down at the edges they are more easily held from curling up.

Canadian Beedom.

Conducted by "BEE-MASTER."

Salutatory.

The title of this department, and the nom-de-plume of its conductor, must be regarded as Editor York's introduction of the writer to his readers. Neither the title nor the nom-de-plume are of my choosing, and being a modest man, I rather shrink from the title of "Bee-Master," lest it should imply any assumption of authority. I was quite in favor of "Apiologist," signifying a "student of bees," which I certainly have been for many years, and expect to be until I shuffle off this mortal coil. However, Mr. York thought that name stiff, scientific and pedantic, so I willingly dropped it. When "Bee-Master" was proposed, I took kindly to it, because it is the title which in England means the same as bee-keeper does in this country—just as flock-master or sheep-master means one who keeps sheep. As I am a "bloomin' Hinglishman," perhaps it is just as well that I should take the name common to bee-men in my native land.

It may be added that Bee-Master keeps bees and lives in Canada.

"No further seek his merits to disclose,
Or draw his frailties from their dark abode."

Do not waste paper, ink and postage stamps in querying who he is, because, like the celebrated Junius, he is determined to preserve his *incog.*, and to elude detection. As that greatest of anonymous writers said: "I am the sole depository of my secret, and it shall perish with me." So it has. To this day, no one knows who was the author of the celebrated letters of Junius.

Canadian beedom, geographically speaking, includes a pretty big territory. We, in this country, are fond of chuckling that it is bigger than the whole of the United States, with Alaska thrown in. But, actually and practically, it is only a small portion of this vast domain in which bees can be kept to advantage. A comparatively narrow strip or belt stretching from the Atlantic to the Pacific might be defined as that portion of the Dominion which really constitutes Canadian Beedom. But that strip or belt has no superior as a honey-field anywhere in "the wide, wide world." The slopes of Mount Hymettus, the heather hills of Scotland, the glades of the "Sunny South," and the expanses of California, fail to present a richer and better honey-field than that possessed by Canadian bee-keepers. A few persons educated from childhood to its peculiar taste, prefer the heather honey of Scotland to the best Canadian product, just as a Dutchman, with peculiarly educated palate, prefers sour-krout and Limberger cheese to sweet cabbage and the best Stilton: but impartial judges have time and again pronounced our A 1 honey equal to any, and surpassed by none. The claim has been set up that our honey is the best on earth; that our linden is better than American basswood; and that we can beat all creation in this line. Bee-Master washes his hands of all this extravagant boasting, and sets it down to that peculiarity of human nature which makes a man think his wife is the best in the world, or a mother suppose that her children surpass all others. It is glory enough for Canada to be the peer of the United States in the matter of honey-production. If we can run a neck and neck race with our American cousins, we shall do pretty well. Bee-Master will strive to promote a friendly rivalry, while maintaining, to the utmost, international amity and good-will.

It only remains to be said further at the present time, that this department is to be considered as open to Canadian correspondents, and they are specially invited to contribute to it their very best ideas, in order to make Canadian Beedom all that its name implies.

Communications for this department must be addressed to the office of the American Bee Journal, 56 Fifth Ave., Chicago, Ill.

The Next North American Convention.

Mr. McKnight has a brief article in Gleanings for Dec. 1, in regard to the next meeting of the North American Bee-Keepers' Association, expressing his pleasure that the meeting is to be held in Toronto, and setting forth inducements to a large attendance. In thus writing, Mr. McKnight has voiced the sentiments of Canadian Beedom. Though some are still rather sore over what they think our practical exclusion from all membership, in consequence of the incorporation of the Association, that will not abate the warmth or sincerity of our welcome to our American cousins. We are well aware that the legal change in the Constitution was the work of a very few individuals, and that it was part of a centralization scheme which did not materialize. We know also that the great majority of American bee-keepers feel as warmly as ever toward their northern neighbors. We propose, therefore, to give the Association a cordial welcome—to receive its members, as it were, with open arms and open hearts. Come one, come all, and try to make yourselves at home if it is a "furrin' land," monarchy-curst, and under petticoat government.

Mr. McKnight suggests that the meeting be held during the Industrial Fair, when extremely low rates are made by the railroads. As an argument for this he mentions that one of the Fair days is known as "American Day." The only danger is that the attractions of the Fair might be too great to admit of a regular attendance at the meetings of the convention. This would be to some extent obviated if the Association were to meet on the Fair grounds, and were to hold a bee-keepers' conversazione, such as is often held in England, dispensing for once with the reading of formal essays.

I am quite sure that if the Directors are applied to in good time, they will cheerfully make arrangements for the convention to meet on the Fair grounds, where now there is ample accommodation. A large tent could be obtained for the occasion such as the one owned by the Ontario Agricultural College, which would be readily obtainable for such a purpose. It might be used as a hall by day and a dormitory at night, by providing a lot of stretchers. There will be plenty of provisions at hand, and the affair might be made a very enjoyable picnic.

A Few Brief Notes.

The annual meeting of the Ontario Bee-Keepers' Association will be held in the city of Stratford, on Jan. 22, 23 and 24, 1895. All bee-keepers are cordially invited to attend. Mr. W. Couse, of Streetsville, is the Secretary.

The December number of the Canadian Bee Journal contains a full-page engraving of The A. I. Root Company's establishment at Medina, Ohio; also an interesting account of a visit paid by Editor Holtermann to Messrs. C. F. Muth & Son, at Cincinnati.

Here in Canada, the free blooming of dandelions, and even white clover late in the fall have been unusual features of the season of 1894. Viper's-bugloss bloomed early and continued long. The golden-rod was a failure, owing to the prolonged drouth.

Mr. McEvoy states his system of caring for bees in spring in the December number of the Canadian Bee Journal. It is to keep everything snug until the bees begin gathering in

spring, then uncap the brood-frames gradually on warm evenings, put on the half-stories, and let the bees carry honey up from below. As room is thus made in the brood-chamber, the queen betakes herself to laying, so that soon there is an abundance of brood. If wet and unfavorable weather sets in, as it did last spring, the bees must be fed, or not enough honey will be taken from the sealed stores overhead to feed the young larvæ sufficiently to keep them growing vigorously. Those who, like himself, fed their bees during the trying month of May last, were the ones who reaped the best honey harvest.

The Brant Bee-Keepers' Association met in the Court House at Brantford, Nov. 3, 1894. Owing to unfavorable weather, the attendance was small, but the proceedings did not lack interest. The subject of winter packing received most attention.

The Practical Bee-Keeper reports a meeting of the Leeds and Granville Association at Brockville, Oct. 9, 1894. The President, Mr. M. B. Holmes, gave a retrospect of progress made in the past ten years, and said:

What a wonderful change has taken place! Then it was a box containing a chaotic mass of honey in the comb; now it is a dozen or so of one-pound sections nicely finished by the bees themselves. Then it was "Strained Honey," a compound of nectar of flowers, pollen, grains of wax, etc.; now extracted honey in an amber liquid fit to tempt the most fastidious taste. But that which is of most interest to the general public is this fact; that, because of modern improvements, honey has been so reduced in price that it is no longer a luxury seen only on the tables of the rich, but it is within the reach of all. And what do we see as a result? I think we may safely say that there is ten times as much honey consumed as there was ten years ago, and if the bee-keepers of this country do their whole duty, there is not a doubt that the consumption of honey will continue to increase at the same rate for the next ten years.

An address was read from Mr. Allen Pringle, on "Bee-Keeping in Ontario," for which we shall try to find room in the next issue of Canadian Beedom.

Convention Notices.

COLORADO.—The 15th annual meeting of the Colorado State Bee-Keepers' Association will be held on Monday and Tuesday, Jan. 21 and 22, 1895, in Denver. H. KNIGHT, Sec.
Littleton, Colo.

NEW YORK.—The annual meeting of the Ontario Co., N. Y., Bee-Keepers' Association will be held in Canandaigua, N. Y., Jan. 25 and 26, 1895. Come early. Everyone come.
Bellona, N. Y. RUTH E. TAYLOR, Sec.

ONTARIO, CANADA.—The annual meeting of the Ontario Bee-Keepers' Association will be held at Stratford, Jan. 22, 23 and 24, 1895. All bee-keepers are cordially invited to attend. W. COUSE, Sec.
Streetsville, Ont.

MINNESOTA.—The regular semi-annual meeting of the Southern Minnesota Bee-Keepers' Association will be held on the first Monday in May, 1895, at LaCrescent, Minn. All bee-keepers invited. E. C. CORNWELL, Sec.
Winona, Minn.

PENNSYLVANIA.—The Venango County Bee-Keepers' Association of northwestern Pennsylvania will hold their 2nd annual meeting in the City Hall at Franklin, Pa., on Jan. 28, 1895, at 1 o'clock p.m. All interested send for program. C. S. Pizer, Sec.
Franklin, Pa.

WISCONSIN.—The 11th annual meeting of the Wisconsin State Bee-Keepers' Association will be held in the Capitol, at Madison, Feb. 6 and 7, 1895. All bee-keepers are requested to attend, whether they receive a formal notice or not. H. LATHROP, Rec. Sec.
Browntown, Wis.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association on March 16, 1895, at Goodno's Hall, in Bronson, Bourbon Co., Kans. It is the annual meeting, and all members are requested to be present, and all bee-keepers are cordially invited. J. C. BALCH, Sec.
Bronson, Kans.

VERMONT.—The next annual convention of the Vermont Bee-Keepers' Association will be held in Middlebury, Vt., on Jan. 30 and 31, 1895. Programs will be prepared and mailed later. Let every Vermont bee-keeper begin NOW to prepare to attend, and all those who can reach Middlebury, whether you live in Vermont or not, we want you to come.
Barre, Vt. H. W. SCOTT, Sec.

INDIANA.—The Indiana State Bee-Keepers' Association will hold its fifteenth annual meeting at the State House, Indianapolis, on Jan. 9, 1895. There will be three sessions—morning, afternoon and evening. Several other associations will convene here at the same time, thus securing reduced rate of 1⅓ fare for the round trip, but a certificate must be asked for when purchasing your ticket. Programme will be issued in December.
WALTER S. POUDER, Pres.
Indianapolis, Ind.

One-Cent Postage Stamps we prefer whenever it is necessary to send stamps for fractions of a dollar. By remembering this, you will greatly oblige us.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Dec. 27.—Up to the present the sales on honey have met with our expectations. We have received considerably more honey than we figured on handling, owing to the short crop report, and we think the early shippers reaped the benefit. However, we are now getting the average price, viz.: Fancy, 15c.; white, No. 1, 14@13c. Extracted, 6@7c.
Beeswax, 28@29c. J. A. L.

CHICAGO, ILL., Dec. 27.—The trade is taking some comb honey for holiday display. This helps out all the choice lots, which bring 15c. per pound; other grades that are good to choice, 13@14c. The dark grades as usual are slow of sale at 9@10c. Extracted sells chiefly at 6@6½@7c. Very little basswood or clover is offered in 60-lb. tins, two in a case. Such meet with ready sale at top prices.
Beeswax scarce at 28c. R. A. B. & Co.

NEW YORK, N. Y., Dec. 20.—The market for comb and extracted honey is good, and the supply equals the demand. Fancy clover and buckwheat sells best; off grades are not quite as salable; and 2-pound sections are little called for. We quote as follows: 1-pound fancy clover, 13@14c.; 2-pound, 12½@13c.; 1-pound white, 12@12½c.; 2-pound, 12c.; 1-pound fair, 10@11c.; 2-pound, 10@11c.; 1-pound buckwheat, 10@11c.; 2-pound, 9@10c. Extracted, clover and basswood, 6@6½c.; buckwheat, 5@5½c.; Southern, 50@60c. per gallon. Beeswax, scarce and in good demand at 29@30c. C. I. & B.

CINCINNATI, O., Dec. 21.—No change since our last. The market is quiet, with a fair demand at 14@16c. for best white comb honey, and 4@7c. for extracted.
Beeswax is in good demand at 22@27c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, Mo., Dec. 26.—The supply of comb honey is fair; demand is fair. Supply of extracted is good; demand light. We quote: 1-lbs., No. 1 white, 14@15c.; No. 2 white, 12@13c.; No. 1 amber, 13@14c.; No. 2 amber, 10@11c. Extracted, white, 6@7c.; amber, 5½@6c.; dark, 4½@5c.
Beeswax, 22@25c. C. C. C. & Co.

ALBANY, N. Y., Dec. 26.—Honey in better demand, especially the high grades of white comb honey. We quote: No. 1 white, 14@15c.; No. 2 white, 13@14c.; Mixed white, 11@12c.; No. 1 buckwheat, 12@12½c.; No. 2 buckwheat, 11@11½c.; common, 10@11c. Extracted, white (Northern), 7@8c.; amber, @6½c.; buckwheat, 5½@6c. Beeswax, 27@29c. Do not look for much of any change in these prices, and advise now to have honey on the market as early as possible for best prices. H. R. W.

BUFFALO, N. Y., Dec. 17.—The demand for honey is very quiet. We quote: Fancy, 13@14c.; choice, 11@12c.; others from 8@10c. Liberal amount of stock in market. The prospects are that the demand will be very light until after the holidays. Extracted is moving very slowly at 5@7c. B. & Co.

NEW YORK, N. Y., Dec. 26.—The receipts of comb honey have been very large and exceed those of former years by far. The demand has not been very active of late and there are no signs of improvement. The supply is accumulating and the prices show a downward tendency. We quote: Fancy white, 1-lbs., 13@14c.; fair white, 11@12c.; buckwheat, 9c. Two-pound sections are in very light demand and sell at from 1@2c. a pound less. The market on extracted is quiet, with plenty of supply of all kinds. We quote: White clover and basswood, 6c.; Southern, 50@55c. per gal. Beeswax is firm and in good demand at 30@31c. H. B. & S.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

J. A. LAMON, 43 South Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 28 & 30 West Broadway.
CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.
FRANCIS H. LEGGETT & Co., 128 Franklin St.

Kansas City, Mo.

CLEMONS-MASON COM. CO., 423 Walnut St.

Albany, N. Y.

H. R. WRIGHT, 326 & 328 Broadway.

Buffalo, N. Y.

BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

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Pease mention the Bee Journal. Nov15

Advertisements.

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Makes a hit wherever sung. Price 40 cents postpaid. Reduction to Music Teachers.
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Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

A Bee-Book or a Bee-Paper—Which for the Beginner?

Query 954.—Not knowing anything about bee-keeping, is it better for me to buy a bee-book or spend the same amount of money for a bee-paper?—N. C.

Buy a bee-book.—M. Mahin.

Buy a bee-book.—W. G. Larrabee.

Buy a bee-book first.—Dadant & Son.

Both! If only one—the bee-paper.—W. M. Barnum.

You ought to have both.—Mrs. J. N. Heater.

Get both; but you need the bee-book most.—J. A. Green.

Book first—journal next. You will want both.—Eugene Secor.

Buy a bee-book, and spend the same amount for a paper also.—P. H. Elwood.

Spend your money for a good paper, and you will want the books later.—H. D. Cutting.

Never try to do without both; but between them, I would take the bee-paper.—B. Taylor.

You need the bee-book to start you, and the bee-papers to *keep you started.*—Jas. A. Stone.

Get a book, and then earn money enough some way to get the paper, too.—C. C. Miller.

You want them both. If you cannot afford to post up, better let the bees alone.—E. France.

Invest a dollar for a bee-book, and another dollar for the American Bee Journal.—J. P. H. Brown.

By all means buy a good standard work on bee-culture. Take the bee-papers, also.—J. M. Hambaugh.

Buy a standard work that covers the ground. Better follow one expert than many novices.—Mrs. L. Harrison.

You cannot afford to be without either, though for a time you could better dispense with the paper than the book.—R. L. Taylor.

You certainly need a book, as the paper does not consider all topics. You also should take one of the best journals—as the American Bee Journal.—A. J. Cook.

You should have a standard work on bees, by all means; but why not also take one or more "bee-papers," and keep posted on what is going on?—C. H. Dibbern.

Buy a book. Read it until you can tell all there is in it, then take a bee-paper. No bee-keeper that is worthy of the name will do without both.—G. M. Doolittle.

If you cannot raise money enough to get both, you would better not try bee-keeping just yet. You should get the book first, then the bees, and next the paper.—Emerson T. Abbott.

The book will be the most valuable for you on the start, as you can find something in it to fit every case, and for all times of the year. I should also want the paper as soon as possible.—S. I. Freeborn.

Don't fool away any time in the "student" business, as some advise, but buy several good bee-books, and then subscribe for as many bee-papers as you can afford, and experience will do the rest.—G. L. Tinker.

Knowing what I do now, I would get a good bee-book and all the bee-papers I could afford. But to come down to your question direct, I will say I don't know which would be best for you. In either case, you won't have one long till you have both, if you are going to make a bee-keeper.—Mrs. Jennie Atchley.

If I could not have both—standard books and bee-papers—I would take the paper. But neither will do any good unless you get a colony of bees and put your knowledge to practice, in a practical way. But surely you could muster enough cash to get a good, practical book. It will open your eyes.—G. W. Demaree.

Buy a bee-book, and study thoroughly, so that you may learn the theory and general principles, so that you may know how to begin. It is equally essential to take some good live bee-paper—the American Bee Journal is as good as the best—in order to keep in touch with new ideas and new experiences, for bee-keeping is progressive, and the bee-papers keep us posted on that progress.—J. E. Pond.

HONEY FOR SALE I have about 3000 lbs A No. 1 Fall Honey for sale; 3 distinct flavors—Smartweed (or heart's-ease), Aster & Spanish-Needle. Price, 7 cts. per lb. F. O. B. in 60-lb. cans. Sample by mail on application. Address, P. O. Box 783.
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CONVENTION DIRECTORY.

Time and place of meeting.

1895.

Jan. 9.—Indiana State, at Indianapolis, Ind. Walter S. Ponder, Pres., Indianapolis, Ind.

Jan. 9, 10.—Minnesota State, at Lake City. Wm. Danforth, Sec., Red Wing, Minn.

Jan. 21, 22—Colorada State, at Denver, Colo. H. Knight, Sec., Littleton, Colo.

Jan. 22-24.—Ontario, at Stratford, Ont. W. Couse, Sec., Streetville, Ont.

Jan. 25, 26.—Ontario Co., at Canandaigua. Ruth E. Taylor, Sec., Bellona, N. Y.

Jan. 28.—Venango Co., at Franklin, Pa. C. S. Pizer, Sec., Franklin, Pa.

Jan. 30, 31.—Vermont, at Middlebury, Vt. H. W. Scott, Sec., Barre, Vt.

Feb. 6, 7.—Wisconsin, at Madison, Wis. J. W. Vance, Cor. Sec., Madison, Wis.

Mar. 16.—S. E. Kansas, at Bronson, Kan. J. C. Balch, Sec., Bronson, Kan.

May 6.—Southern Minnesota, at LaCrescent, E. C. Cornwell, Sec., Winona, Minn.

☞ **In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—The Editor.**

North American Bee-Keepers' Association

OFFICERS FOR 1895.

PRES.—R. F. Holtermann.....Brantford, Ont.
VICE-PRES.—L. D Stilson.....York, Nebr.
SECRETARY.—W. Z. Hutchinson...Flint, Mich.
TREASURER.—J. T. Calvert.....Medina, Ohio.

National Bee-Keepers' Union.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
GEN'L MANAGER—T. G. Newman, Chicago, Ill. 147 South Western Avenue.

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Binders for this size of the American Bee Journal we can furnish for 75 cents each, postpaid; or we will club it with the Bee Journal for a year—both for $1.60. We have a few of the old size (6x9) Binders left, that we will mail for only 40 cents each, to close them out.

Some Unsolicited Testimony.

☞ "I like the American Bee Journa very much, and have been a reader many years."—Mrs. Josiah Smith, of Minnesota, Nov. 26, 1894.

☞ "I can't get along without the American Bee Journal, even if times are hard. Bee-keepers around here say they can't afford to take it. They all keep bees, but get no honey because they take no paper."—Chas. L. Glidden, of Minnesota, Dec. 21, 1894.

☞ "I have taken the American Bee Journal just a year, and would not think of doing without it. Why, it is just like being in a bee-convention every week. There are Mrs. Atchley, Dr. Miller, and others, having their say on bees, etc. Why, it is simply immense! Put me down on your subscription list to stay."—Jas. A. Minnick, of Indiana, Dec. 15, 1894.

WHERE DO THEY GET THE STONE?

TO BUILD THAT FOUNDATION.

That is what a man said who read our advertisement. We do not use Stone, but

BEESWAX

to make Comb Foundation, and it takes a great deal of it. Therefore, if you have any **BEESWAX FOR SALE,** please let us hear from you, and we will give you our prices.

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Mention the American Bee Journal.

See the Clubbing Offers in this Number.

General Items.

Results of the Past Season.

I had 6 colonies of bees, spring count, and increased to 8. They gave me 334 pounds of comb honey, of which 144 was clover, and netted me 15 cents per pound, and 190 of buckwheat, at 13 cents per pound. My neighbors found fault with the season, and say it was a poor one. This is the fourth year that I have handled bees. I am making it a study, and read all the bee-literature that I can get hold of. I like it very much.

The American Bee Journal is the best bee-paper I know of, and gives the most reading for $1.00 that I know of.

C. A. BILLINGS.

Clyde, N. Y., Dec. 24.

Got Plenty for Winter Stores.

This has been a bad season for the bees, on account of the dry weather. I had 17 colonies in the spring and had only one swarm. I did not get a pound of surplus honey, but they have plenty for winter. We hope for a better season next year. OTTO F. SEMKE.

Harrison, Kans., Dec. 22.

Glorious Rains in Southern California.

The present year has been disastrous to bee-keepers in southern California. The insufficiency of rain during the past spring failed to infuse the life-giving qualities into the honey-plants, consequently the fatality among the "busy bees" in this locality was very great. The long drought was broken ten days ago, and mother earth has discarded her scared robe for one of living green. The flood gates of Heaven were opened this morning, and a continuous downpour of rain for the past ten hours is the result. J. M. CROW.

Encinitas, Calif., Dec. 19.

Not a Pound of Good Honey.

Honey was a total failure in this section last summer. I didn't get a pound of good honey from 60 colonies of bees. I had to feed some for winter.

J. C. HENDRICKS.

Decatur, Ill., Dec. 20.

Bee-Keeping in Alabama.

This was the sorriest year here for honey yet. The freeze we had in April destroyed the honey crop till the month of June. There were plenty of hungry bees up till then, and then they got some honey. I got 30 pounds of honey and increased from 10 to 14 colonies. My bees are in the best condition for winter that I ever had them in, or at least they are all strong in bees. All seem to be healthy, as they have not been confined to their hives a day this fall, and have enough honey in each hive to winter two colonies of bees, as the fall flow was good, and as I would not take it from them. The bees were preparing for winter while I was waiting for my time to come cext year. I farm for a living, but I don't forget my bees. I go and see them three times a day.

Bees that are lost in this part of the

country suffer from being queenless, or weak, and then the moth-worms take possession of the combs; that is the only thing that I have known to cause any loss of bees, outside of starving to death. There were some bees frozen to death here last winter, but such a winter as that was we have not had in this country for a long time.

My sweet clover grew from one to three feet high sown last spring, and we had no rain from May 4 to August 3. It is the first sweet clover seen in this part of the country. My alfalfa grew to 10 inches high, and bloomed. It was a sight to people here. I am just trying a little of each to see what they will do in this locality. M. W. GARDNER.

Bankston, Ala., Dec. 4.

Bees in Poor Condition.

I had no honey this year. I had 235 colonies of bees one year ago, and now I have not more than 75, and those in poor condition. I have been keeping bees in this State since 1881, and have always had a good, fair crop until this year. But I am hoping for next year. I presume there will be thousands of colonies lost during the years of 1894 and 1895 in Southern California. But we have just had a fine rain, which gives us hope for another year.

C. C. THOMAS.

Murietta, Calif., Dec. 20.

He Prefers the Gallup Frame.

I had 30 colonies, spring count, in "long-idea" hives, and 31 pounds was the average, all late honey. The white clover blossomed, but yielded no nectar. I use the Gallup frame. The Langstroth frame does not seem to winter bees as well here as a deeper frame. There are not many Langstroth frames in use here any more. I seem to be more successful with the Gallup than my neighbors are with the Langstroth frame.

The "Old Reliable" comes weekly, and is just what bee-keepers want.

L. B. WHITNEY.

Covington, Pa., Dec. 10.

Report for 1894—T Super, Etc.

My report for 1894 is as follows: Comb honey in one-pound sections, 2,500 pounds; extracted, 3,600 pounds. It was all fall honey, as we had no other. My bees are all in pretty good condition for winter. I also had a very fine lot of young queens this year—124 of 1894, 78 of 1893, 22 of 1892, and 2 of 1891. My bees were nearly non-swarmers this year—only 4 swarms from about 200 colonies.

The weather is still warm, and bees are flying every few days. My 225 colonies have been in the cellar over 35 days.

I would like to say something in regard to the "Townsend Section Folder," described on page 821 of the Bee Journal for June 28, 1894. Six years ago last spring I made the identical folder, and sent it to Mr. A. I. Root. Then I had him send it to Dr. Mason, who, I suppose, still has it. Now I am no "big gun," nor any fancy writer, but if any of our bee-friends will give me a call, I can show them as fine an apiary as there is in the State, and as fine a lot of bees.

I should like to say to Dr. Miller, if he ever comes over this way, we would be very much pleased to have him give us a call. I am with the Doctor in the use of the T super case. I would not have any other, as it is the handiest and best all-around case, and the honey can be cleaned the fastest in it, with the least work. N. STAININGER.

Tiptop, Iowa, Dec. 24.

A Bee-Keeping Experience.

I sent for Dr. Tinker's "Bee-Keeping for Profit," not so much because I thought it would teach me how to get rich from my bees, but because I thought it might give me a little instruction as to how to get some honey (comb honey, as that is the kind I want) from my bees next year. I started an apiary near Seabright, N. J., last spring. On May 18 I received 5 colonies of bees, with five imported Italian queens. For the first three weeks it was cold and wet, and then the summer was very dry. Old bee-keepers tell me it was a very bad year for bees. I have increased my colonies to 8. I lost 3 of the imported queens.

I have taken ten one-pound sections of honey, and fed the bees about 150 pounds of sugar syrup. I did not get much honey, but I have one satisfaction—I still have the bees, and I think they are in good condition to go through the winter. I am a little like the fisherman, who said he did not care much for the fish, but it was not much fun fishing unless he could catch some. So it is with me, with the bees. I don't care so much for the honey, but it would be a great deal more interesting if I could get 50 or 150 pounds of nice comb honey from each of my colonies next year.

I shall commence feeding a little the last of February, or first of March, and try to have full colonies by apple blossom time. I feel pretty sure (after reading the American Bee Journal) that if any one wants honey, he must have bees, and plenty af them.

I. N. HOAGLAND.

Brooklyn, N. Y., Dec. 10.

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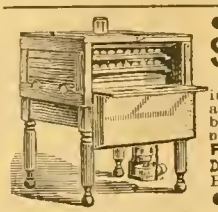

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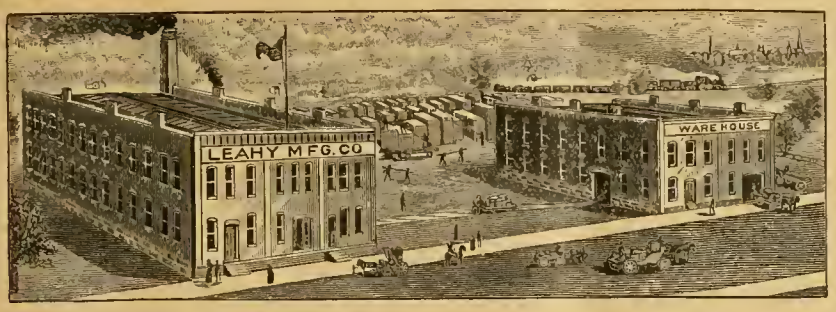

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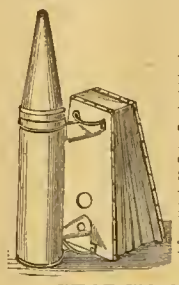

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35th Year. CHICAGO, ILL., JANUARY 10, 1895. No. 2.

Contributed Articles.

On Important Apiarian Subjects.

The Production of Comb Honey.

The first of a series of articles on this subject.

BY EMERSON T. ABBOTT.

Why write anything more on this subject? Has not all been said that can be said? Why should I be expected to write on the subject, anyway? I am sure I do not know why, except that Editor York has asked me to do so; and, as a matter of business, I have agreed to comply with his request. I do not mean to say by this that I do not have any ideas on the subject of comb honey. Neither do I mean to say that my ideas are exactly the same as all other people's, and therefore

EMERSON T. ABBOTT,

Ex-President of the North American Bee-Keepers' Association.

there is no use to take time and space to express them. No, I do not mean anything of this kind, for many of my ideas are not like other people's, as you will discover, Mr. Editor, from the way the bee-keepers will be hopping onto my notions before I get through with this series of articles.

I write, then, because the editor asked me to do so, because I have something to say, and because—well, I do not know as it is necessary for me to give all the reasons why I write.

"Why write any more about comb honey?" Why write any more about anything? Why preach the gospel of good works? Why talk temperance reform, etc., etc., etc.? Simply because there are people in the world who need reforming, and because there are children growing up in the world who need teaching so they may not go astray and need reforming, too.

JAMES A. STONE.

Secretary of the Illino's State Bee-Keepers' Association. (See Report in this number.)

I apprehend, Mr. Editor, that you have some readers who have not read all that the "wise men" of the ages have written on the subject of comb honey, and to them I address myself.

To begin with the bottom facts,

WHAT IS NECESSARY IN ORDER TO SECURE COMB HONEY?

Why, bees, of course! I presume Dr. Miller would say, "No; that is not it. There must first be some nectar in the flowers." But I am not intending to be switched off the track by any such a frivolous objection as that. If he cannot find any nectar in Illinois, all there is of it he must move to the alfalfa regions of Colorado, or else call a convention in his own State, and spend his time talking "bee-talk" until some nectar comes.

Bees, then, are what we want. What kind of bees?

"Italians, of course," say the "wise men of the East," and of the West, too, for that matter. I am not sure they are correct, now I have come to think of it. But, Mr. Editor, is it safe to speak right out and say what I think, for must not the queen-breeder and supply dealer—and I am among them—live? "Sirs, ye know that by this craft we have our wealth;" but "craft" or no "craft," facts cannot be ignored, and the fact is

ITALIAN BEES ARE NOT THE BEST BEES FOR COMB HONEY.

I hope that the day will come when extracted honey will be an article of general consumption, but I fear that the day is a long way off when comb honey will be considered in the light of anything but a luxury. As long as this is the case, appearance will be everything, especially in the market, and on the tables of the rich. The man who runs his apiary for comb honey cannot afford to ignore appearances.

The comb honey of other bees is not any better to the taste than that of Italians, and I have been led to doubt sometimes if it was as good, but it is whiter, and this is what the people demand in comb honey. Whiteness will almost hold its own against all other qualities combined. This being true, the Italian bees will have to take second place in comb honey production. Of course, I am not alone in holding this view, as Mr. Heddon pushed it prominently to the front years ago, and Mr. Hutchinson gave the idea his hearty endorsement in his book. It was not from either of these gentlemen, however, that I got this idea, but from being an exhibitor of honey at agricultural fairs, where I learned what it was that attracted the attention of the crowd the most.

The disposition of Italians to cling to the combs might have been a serious objection to them at one time, but in this age of bee-escapes, surely no one will think of trying to get the bees out of the supers in any other way. But more of this in the future. There are also some other objections to the Italians as comb honey producers, but none are as serious as the one I have emphasized.

We must have a bee which does not fill the cells so full of honey and cap so close down on it, if we want to secure the kind of honey the market demands. As we are learning every year to handle the bees less in securing a crop of honey, I do not know as many of the objections which have been made against the German bees would now hold. I, at least, should not despair of securing a crop of fine comb honey with them, if I lived in the alfalfa regions of Colorado or Kansas. Perhaps

A CROSS BETWEEN THE GREY BEES AND THE ITALIANS

would give vim and energy to the stock, and not detract any from the whiteness of the honey. Many of the so-called hybrids—mongrels—are about as quiet as the pure Italians. I have had great hopes of a cross between the Carniolans and the Italians, and have not yet given up the idea that the Carniolan bee will in some way prove a boon to the comb honey producer of the future. I am not so certain but a mixture of Carniolan blood with our common gray bee would be a good thing. I am sure that the comb honey producer will find it to his advantage to instill as much Carniolan blood as possible into his apiary. But, says one, that will make the bees swarm more. I am not so sure of this, if they are handled properly; but what if it does make them swarm?

IT IS THE SWARMING BEES THAT GATHER HONEY;

and all this talk of a non-swarming race is a fallacy, in my opinion. You might just as well talk of a non-laying hen being the best to hatch eggs! We may control the swarming impulse in a degree, but to destroy it is to make the bee another animal, and it cannot be done. I, for one, do not care to do it, even if it can be done.

The last bees I would select for comb honey are the so-called 5-banded bees, or yellow bees. The Cyprians are worse, if anything, about giving their honey a watery appearance than the Italians, and all of the so-called

FIVE-BANDED BEES HAVE MORE OR LESS CYPRIAN BLOOD IN THEM.

I am aware that Mr. Doolittle, Mrs. Atchley, and others, claim that they know that their 5-banded bees have nothing but Italian blood in them. I should like to know, though, how they can be so sure about this. Have they had charge of the mating of the ancestors of these bees for generations back? More, I am not so sure that all yellow bees do not have some Cyprian blood in them.

I might say just here that I think the bee-keepers have made something of a mistake in catering to this demand for white comb honey. In many cases, *I fear that we get white honey at the expense of some other more desirable qualities.* Especially is this true in the case of basswood honey, for in his great haste to get it off of the hive while perfectly white, the bee-keeper frequently removes his honey before it is well cured, and then it lacks body, and richness of flavor. In some cases it is so thin and watery that it sours or granulates in the combs, either of which spoils it, of course.

I think the richest and finest flavored Missouri honey I ever saw was gathered by a colony of bees, the mother of which came direct from Syria, through Mr. Frank Benton. This honey was a long ways from white. I mean the cappings. They were a rich straw-color, as nearly as I can describe it. So you can see that

WE DO NOT WANT SYRIAN BEES,

if we are to cater to the demand of the general public for white honey. I noticed, however, while I had these bees, that it is very easy to teach the consumer that the whitest honey is not always the best honey; for when I would take my customers some of this honey and explain the matter to them, and get them to try it, they would always ask for more. However, it is a theory of mine that life is too short to try to prove to every man that the thing he wants is not the best, and so I say, when convenient, let him have his own choice, and we can take the time we might spend convincing him, in providing for the wants of another customer. The public wants white comb honey, and we may just as well keep the bees that produce it. The whiter it is, the more ready sale it will find.

The next thing of importance in the production of comb honey is a hive, and I will begin my next article with a discussion of this.

St. Joseph, Mo.

(To be continued.)

Comments on Hive Construction and Tests.

BY EDWIN BEVINS.

After reading the article by F. L. Thompson, in the American Bee Journal for Nov. 8, 1894, I felt like shouting with old Archimedes—"Eureka!" But, after reading the replies to Query 950, my ardor was considerably cooled, though it is not yet down to the freezing-point. I still persist in believing that I have found it—that is, I have found a way to enlarge the breeding-room of the 8-frame hive without having to change the size of the section-cases, bottom-boards or covers. Whether the knowledge obtained by the reading of Mr. Thompson's article will be of any practical advantage to me or not, is something that I see I have got to find out by experiment, if I ever find out at all.

The replies to Query 950, as is the case with the replies to almost all of the Queries that have preceded it, don't settle anything. Some of the persons answering this Query say "Yes;" others, whose opinions are equally entitled to respect, say "No;" some say "I don't know," and others answer as if they neither know nor care. Talk about the science of apiculture! Science to the dogs! Apiculture is one prolonged, never-ending interrogation-point.

This enlargement of the brood-chamber downwards seems to me to have some advantages over enlargement sidewise, but then "I don't know." It is one of the things, however, that some fellow might find out if he thought it worth his while. Some comb-honey producers I see do not think it worth while, being satisfied with the standard frame, or wishing they had a shallower one. I know that I had some colonies of bees the past season that were too big to be comfortable in the ordinary 8-frame hive, and I am going to give some of them a chance to work for comb honey next season in less restricted quarters.

I shall make this winter several 8-frame hives having frames with end-bars two inches longer than the ones I now use. Mr. Thompson sees no serious obstacle to the general use of this kind of frame except the "standard." He bewails the standard very much as Shakespeare makes Lucrece bewail opportunity. If he made his own hives and used only a handsaw, a hammer, a square, a plain, and a jack-knife to make them with, he would not care a tinker's ladle for the standard. Of course, one will have to use the open-end hanging frame, but lots of bee-keepers do that, and don't seem to know that they are hurt much. I confess that I like the V-edged Hoffman a little better, and I guess that some supply maker could be induced, for a little extra pay, to cut the end-bars two inches longer, and that would make fair sailing so far as I am concerned, as I do not want anybody to make hive-bodies for me.

When spring comes I am going to try some double-headed experiments with these deeper hives and the ordinary dovetailed hives. In order to have the conditions as nearly equal

as possible, I shall send South for several three-pound lots of bees, and an untested Italian queen with each lot. Half of these lots I will place in hives with the deep frames, and half in hives of standard size, and give all the same care as nearly as possible through the season. Will not this be a fair test, and help to determine the relative value of the two kinds of hives?

I would get some nuclei from some Northern bee-keeper, each of which should cost the same as one lot of the Southern bees, as nearly as possible, and divide them between the two kinds of hives as before mentioned, but here the standard comes in and puts a stop to experimentation. I do not see any way yet to circumvent the standard. But, anyhow, I will get some nuclei and place them in standard hives in order to determine whether the same amount of money expended for a nucleus will bring as good returns as an equal amount expended for a 3-pound lot of Southern bees. Next fall, if nothing happens, I will tell the readers of the American Bee Journal how I came out.

A PROPHETIC VISION.

I am looking forward with considerable interest to the next meeting of the North American, at Toronto. I may not be there, but I have a prophet's vision of some of the things that may be seen at that convention. I see Dr. Miller there, and I also see him arise and make a speech, the burden of which is, "I don't know." I see John McArthur there, going through the instructive and money-making process of sulphuring 200 to 400 colonies of Italian and Carniolan bees. I see A. I. Root there, trying to persuade some fellow to forego the use of tobacco, and go to raising Prizetaker onions in the dovetailed hive. And, lastly, but not leastly, I see Emerson Eat'n Hasty Pudd'n there, in his Ku-Klux robe.

Leon, Iowa.

Something About California Bee-Keeping.

BY DR. E. GALLUP.

I enclose a sample letter similar to dozens that I receive, and here is about what I have to say to them:

It is a hard matter to get permanent employment with bee-keepers here, as the bee-keepers are only obliged to hire help about three months in the year in an ordinary season, and most of them do not hire at all, as they do all necessary work within their own families.

Bee-keepers are all honorable, so far as I have been acquainted with them in this State, without a single exception.

Apiaries are located up in the mountains or foot-hills—none in the valleys, to speak of. They are isolated, and away from society. The families of bee-keepers—a great many of them—live in the valleys or cities, except about three months in the year. They then move to the bee-ranch during extracting time, and live there in a sort of camping-out life. The owner goes up to the bee-ranch occasionally at other times in the year.

Bee-keeping here is altogether different from that in the East. For example, take Mr. Miller, who lives here in Santa Ana. His apiary is located about 30 miles up in the mountains, in a beautiful canyon, called "Belle Canyon"—among live-oaks and sycamores. He has a few acres in fruit, and a vegetable garden, and hired only a common hand, when he took out 45 tons of honey in one season. He usually keeps about 275 to 300 colonies. In an apiary of that size there is very little swarming—only about sufficient to keep the number good. The apiarist himself does all the necessary work, and only attends to them occasionally, except at extracting time.

There is no trouble in fixing for winter. After the hives are once made, extracting house, fixings, etc., there is comparatively little to do—not enough to pay for keeping a hired hand. The season of 1894 was an entire failure. It was the first for the whole country in 17 years.

Bees fly and gather pollen here almost every day in the year. I have been here 15 years, and in all that time I have known only five days in any one year that bees did not fly. They are now (Nov. 26) humming on the eucalyptus, and will be until February. Then comes willow and other bloom. They have had to be fed this season, but they have filled up well this fall. Where they have been properly cared for, they have been self-sustaining in all those 17 years, in most of the apiaries. One bee-keeper said to me the past season, "If I should have to feed a ton of sugar to keep my bees alive, they have more than paid for it three thousand fold;" and he was correct.

Two persons can extract and can 1,000 pounds per day, and not work so very hard, either, where everything is convenient. While the extracting season lasts there is no bother from robber bees, as in a good season they will scarcely stop to clean up any honey that is spilled or daubed about the hives.

Where else can one find 360 days out of the 365 of climate, for we have climate in summer as well as winter here?

There was a great scare here about foul brood the past season, but it did not "pan out" foul brood at all.

Now, Mr. Editor, perhaps it would be as well to place Gallup's name at the head of his articles instead of the tail, and then "Business" could skip them, as California climate does not set well on his stomach. But it agrees with me first-rate.

Santa Ana, Calif.

[The letter referred to by Dr. Gallup in the first part of his article, contained a number of questions about California bee-keeping, which are so clearly answered in the foregoing that it is quite unnecessary to also print the letter. In fact, the questions can easily be surmised by reading the answers.

Yes, "Business" can skip Dr. G.'s writings, and no "slight" will be felt.—EDITOR.]

The Five-Banded Bees and Golden Italians.

BY H. F. COLEMAN.

I am greatly interested in what that chief of bee-masters—Mr. G. M. Doolittle—has to say with reference to 5-banded bees, as given on page 648 (Nov. 22, 1894); and I am clearly of the opinion that in producing the bees he characterizes as the "5-banded bees," the Italian side has been strictly adhered to. But pardon me, if I express the idea that the bees he so characterizes are not what we know in this locality as "the 5-banded bees." There is certainly a very marked difference. It has been my pleasure to examine closely bees from queens reared by Mr. Doolittle, and compare them with bees known here as the 5-banded variety, and I find that the difference is so marked that even a novice would have no trouble in detecting it.

The 5-banded bees here are evidently crosses with Cyprian or Syrian blood. The abdomens, except the tip, are almost a solid yellow, and their temper is so different from that of the Italians, that it betrays itself.

The Doolittle bees, in the main, are gentle, and not nearly so yellow as our 5-banders, and in my experience are better honey-gatherers. The Doolittle bees should be known as the "Golden Italians," or bees that have been bred for beauty as well as utility; and the others as "the 5-banded bees," or a cross between Italians, Cyprians or Syrians, and bred more for beauty than utility.

I would not be understood, however, as saying that the 5-banded bees are not good honey-gatherers, but in my experience the Golden Italians (for such as I call them) are ahead of the 5-banders, and as to gentleness, they are certainly far ahead. There is another difference that is well to be remembered, and that is, the Golden Italians are somewhat larger than the 5-banded. I have both kinds in my yard, and have given each due attention, and speak from actual experience and observation. I have no interest in the matter but truth.

Sneedville, Tenn.

Does the Queen Will It?—Introducing.

BY W. H. PRIDGEN.

The above is a question asked on page 617 (Nov. 15, 1894). Now, I do not propose to try to answer the question, as Dr. Miller failed, for I have long since learned that I do not always know what I think I do. But some of my experience last summer caused me to come to the conclusion that Mrs. L. Harrison's reply to Query No. 944, did not miss the mark, which was, "Workers are 'boss,' and control the queen." And I believe it holds good as to laying as well as swarming. I don't know anything about the will power of the queen. She may will the sex of her eggs, but I believe she lays the kind the workers want, and where they want them.

The last of June, 1894, a large swarm issued, that I hived on drawn combs, being late in the season. Wishing to supersede the old queen, I removed her and gave them a young one from a small nucleus, but I soon saw that they were not satisfied with the change, and found the queen balled. So I caged her over hatching brood taken from another colony, but they would not receive her kindly in three days. I caged her again, and waited three more days, and on opening the hive I found

that the bees had gnawed the comb away and released her. I found eggs in all the drone-comb, and, as I thought, all the queen-cells torn down on the comb of brood I gave them, and thought all was well—and possibly would have been, had I not disturbed them. But on opening the nucleus I took her from, the next day, to remove a batch of choice cells I put in it three days after removing the queen. I found this same queen in it laying, but no queen-cells. It was hard to believe, but on examining the full colony I found that the bees stopped her after she had destroyed all the cells but one, and had eggs in all the drone-comb and none in the worker-comb. In the nucleus she only laid in worker-comb before and after her removal. I destroyed the cell left, and gave them to another queen which gave satisfaction.

Don't you suppose that the workers, being dissatisfied with the queen they balled, "willed" that she lay drone-eggs?

I also learned not to risk a lot of cells where I remove a *young* queen to introduce to another colony in my own apiary, without clipping her wings; for if they are not received kindly they will return, but after getting old they may not be able to locate their former home.

The case mentioned above is not the only one I have known. The first of August a large swarm issued (from another hive), the queen got lost, and the bees returned. Seven days later I removed all queen-cells, and wishing to try a queen from a noted Northern breeder, I ordered one, and prepared a lot of cell-cups for them to complete while waiting for the queen. At the expiration of ten days I removed the cells, and as the queen had not arrived, I gave them a comb containing eggs to keep them quiet. On Aug. 23 the queen arrived; I destroyed the cells on the comb given them, and introduced her. On the 26th they swarmed out with my new queen, and thinking that I must have overlooked a cell, I examined again, and found no cell, but an egg in every queen-cup I saw, and but few anywhere else. I returned the bees and queen, and the cells were not completed. Do you suppose the "will" of the workers had anything to do with that?

Right here I want to say to Mrs. Atchley that they just did have sealed brood enough to count, for it was a piece not larger than my hand.

The honey-flow from sourwood the first of July (from which I got about 25 pounds per colony, and my only surplus) gave my bees the swarming fever, and I resorted to caging some of the queens to prevent it, and they would often swarm again in two days after being released, with only eggs in the queen-cups.

To combine the hatching-brood and candy plans of introducing, make a hole near one corner of the cage, which stop with a cork until you think the queen would be received. Then remove the cork and fill the hole with candy, and let the bees release her. Creek, N. C.

The Season of 1894—Honey-Plants.

BY E. S. LOVESY.

I have watched the reports of the honey-flow this season with much interest. They form a conundrum which seems hard to solve. They include reports of enormous yields of honey down to almost nothing, and from some localities we hear that the bees are starving, and what is annoying is, that these various reports come from the same localities. We can understand why there has been little or no honey-flow in the drouth-stricken districts, but when we see bee-keepers living in the same neighborhood, and some report a large yield of honey while their neighbors report that their bees have gathered no surplus, we are inclined to think there must be other causes than the lack of honey-producing plants.

In some localities honey-producing plants are very scarce. When this is the case bee-keepers should try to supply the deficiency, or move to some more favored locality. Here, in Utah, we always have from a moderate to a good honey-flow, and as our lucerne fields increase in size and number, so do our honey-flows increase. For hay and honey combined, I do not know of any plant that will equal it; a plant that will grow from five to seven tons of hay to the acre, and often give a good honey-flow—what more could we ask? If any of our bee-keeping friends wish to try it, they should get the soil ready in the fall (also the seed, while it is cheap), and sow early in the spring. A large portion of our honey-flow here, this year, came from lucerne and sweet clover. While some complain that the season of 1894 was a poor one, others report large yields of honey. Some report 200 and 300 pounds to the colony. My bees, the past season, averaged a little over 130 pounds to the colony, the non-swarmers doing much the best.

I traveled through five counties the past season, and with one exception where I found strong colonies, they have done well. The one instance I found six strong colonies in dry-goods boxes of various sizes and shapes, with cracks cut on the top of the boxes, and other loose boxes laid over them, the object being to have the bees crawl through those cracks and fill the top boxes, but the bees did not seem to see it that way, for I found 10 pounds of honey in one box large enough to hold 200 pounds, all the rest being empty.

Now, if our bee-keepers would adopt some good hive—something simple and easy to handle—and keep their colonies always strong, as far as Utah is concerned I do not think there would be much complaint of a poor honey-flow.

I read the statistics on page 802 of Gleanings for 1894, and I notice that Utah is put down as very unfavorable. To this I protest. Besides the five counties that I visited, we received some excellent reports at our convention held in this city Oct. 4, from southern counties, some going so far as to say that it has been the best season they have seen for years. I do not think there ever was, or ever will be, a season in which everybody will succeed, but much of it is due to management. Some assert that they have never had a failure, or what could be called an unprofitable season. Let us hope that this class may increase. Salt Lake City, Utah.

Report of the Illinois State Convention.

BY JAS. A. STONE.

The fourth annual meeting of the Illinois State Bee-Keepers' Association was held at Springfield, on Nov. 13 and 14, 1894. It was regretted very much that Pres. J. M. Hambaugh was just about to leave the State for California, and could not be present. The meeting was called to order by the Secretary, and the Rev. Thos. D. Logan offered prayer. He thanked the Lord that among His manifold works He had made even the little bee to do service for man, and prayed that we might ever be ready to see His hand in all His bountiful gifts to us.

W. J. Finch, Jr., of Springfield, was elected temporary chairman. The minutes of the last meeting were read and approved. A recess was taken that members might have an opportunity to pay their fees.

The Secretary adopted Mr. Benton's plan of "numbering" the members, which was a great saving of time in writing, for the Secretary. The numbers were pasted on the back of the badges, and could be turned either side out, as needed.

The Secretary's Report.

The Secretary's report was read as follows, and then discussed:

At our last meeting, nearly one year ago, our membership was not very large, and as the Chicago meeting was postponed on account of the North American meeting at that place, our only means for increasing the membership of the Association was by some *way* to be managed through correspondence. Acting upon the method the Secretary thought best, 300 postal cards were sent out to those most likely to become members, informing them that members would be entitled to cloth-bound copies of the report that would soon issue—beside other benefits that only members would participate in.

Like notices were sent out through the bee-papers. For awhile after these notices were sent out, as many as three persons sent in their fees for membership by one mail. After a short time it was forgotten, and they only came in very scattering.

When our report came out it proved to be so many pages more than we first calculated on, that the cost was in consequence greater, and therefore not as much left to pay postage as we had hoped; so we gave notice through the bee-papers that any one desiring the Second Annual Report could have it by forwarding 8 cents in stamps to pay for postage and wrapping. For a few days a rush was made for them at the rate of three or four by each mail; but as the notice was lost sight of, the desire for the reports went out of mind, as the old proverb runs—"Out of sight, out of mind."

A few weeks ago I asked Mr. York, editor of the American Bee Journal, to continue the notice for a few weeks. Since which time requests are being sent in (accompanied by the stamps) at the rate of half a dozen or more a week.

In compliance with the resolution of our last meeting instructing the Secretary to send out reply postals—requesting answers to the prescribed questions—relating to the honey crop, all the readers of the bee-papers are familiar with the result. As the honey crop was about gathered before the

September report was in, it was not thought necessary to send out the October series.

I have corresponded with the proper authorities at the University of Illinois regarding the experiment station for bee-keepers, and have twice had encouraging answers—that something would in all probability be done to give our interest a place in the station. I believe that with the proper steps, taken in the right way, something will yet be done for us.

JAS. A. STONE, *Sec.*

The question-box was then taken up, as follows:

Bees Flying in Confinement.

Jas. Poindexter asked for information as to letting bees fly while in confinement.

Chas. Becker advised letting the bees out while in the cellar, by opening the cellar door, and they all seemed to go back to their own hives. On one occasion his cellar was alive with bees all over the outside of the hives, and some of them had found holes to get out of the cellar; so he opened the door and let them have their own way. At night they all went back, and into the hives.

Sec. Stone—Did not your bees fight, and leave a great lot of dead bees around the entrance to the cellar or the hives?

Mr. Becker—No; they all seemed to go into their own hives.

Geo. F. Robbins—The fact that Mr. Becker's bees did not fight, is no proof that they all found their own hives. Bees will not fight unless the conditions are such that they will suspect one another of being robbers or intruders. Bees recognize robbers mainly by actions, but if actions or circumstances are such that they may not suspect strange bees of being robbers, or if the inmates are very much excited, those bees will not be molested. I have for some years practiced moving a hive off some distance, to allow a neighboring hive to catch all the field-bees. I can set a newly-hived swarm on almost any stand in the apiary, and I have by moving the old colony away, strengthened weak colonies by the same means.

S. N. Black—When bees are packed closely in a cellar, they get the scent of one another so that if they get lost they go into any hive and are at home.

Are Bees Governed by Color or Location?

Mr. Poindexter—Do bees go to their hive by color or location?

Mr. Becker—Bees go for location, and not for color or looks of the hive.

Mr. Poindexter—I am satisfied that my bees have gone to the wrong hives. I placed them in the orchard where the trees were all alike—the same number of hives under each tree, and have known them to go to the next row north or south of their own hive.

Sec. Stone—I once had an occurrence that satisfied me beyond a doubt that bees went altogether by location. Near the middle of the day, while many of the bees were out at work, I resolved to make a test of the amount of honey gathered each day by one of my best colonies. In placing the scales under the hive, it raised it about four inches higher than before—having a wood-colored board at the same level where the alighting-board of a white hive had been before. As the bees came in from the field they alighted on the board that was where the alighting-board of the hive had been, till there were several quarts of bees gathered there; and they were a day or two getting righted—that is, to find their hive just four inches higher than it had been. Since that day I only paint my hives one color—*white*.

Mr. Becker—I had an experience just like that.

The convention then adjourned until 1:30 p.m., when it was again called to order, by Vice-Pres. S. N. Black.

W. J. Finch, Jr.—I understand that the Secretary has several essays, sent in by persons who could not attend. Would it not be well to hear one of them now?

The Secretary then read the following essay by Mrs. L. Harrison, of Peoria, entitled,

How Can the Bee-Keepers of Illinois Increase the Honey-Flow?

In looking backward during the last decade, in the State of Illinois, we find that honey-plants have decreased in an alarming ratio. The severe cold winters, and prolonged summer drouths, have destroyed the orchards on the rich, black prairie soils. In many localities fruit-trees have disappeared—their dead trunks have been taken to the woodpile, and the places that once knew them, know them no more forever.

Fruit-bloom was a very important factor in rearing young bees to gather the white clover harvest. Experiments should be made, to ascertain if possible what kind of fruit-trees take kindly to rich, alluvial soils, to furnish both fruit and honey. Small fruits, especially the raspberry, should be cultivated; bees gather delicious nectar from its bloom, for the period of three weeks, and its refreshing fruit, if not cut short by drouths, is ripening for a like period.

> "He who would live at ease,
> Should cultivate both fruit and bees."

Locust trees, especially the honey-locust, yield much honey and make good wind-breaks. Wild cherry yields bitter honey, but it can be utilized in rearing brood. Dan-de-li-ons are not to be despised, for they yield much pollen and some honey; this season they have bloomed twice—spring and fall. It is now the last of October, and they are still blooming, and bees are carrying water and rearing brood.

White clover, what the Indians call "the white man's foot," should not be left to care for itself, but have fostering care. In many localities in Illinois it has become almost extinct; seed should be scattered in pastures and meadows, that its modest bloom may again be seen, and delicious nectar gathered—fit food for gods and men. The honey has a world-wide reputation, and no superior. May it again appear upon our tables and in our markets!

Alsike or Swedish clover—trifolium hybrida—is first cousin to the white and red, and is coming into favor for hay and pasture. Fortunate is the bee-keeper who is located near fields of it. Its growth should be encouraged by all lovers of the busy bee.

Sweet clover blooms all summer and late in autumn, until the ground freezes. Its blooming occupies the interim between white clover and fall flowers. The white variety—melilotus alba—grows from three to six feet high; it grows up rank and green in very early spring, and fowls are very fond of it. Stock do not take naturally to it, but acquire a taste for it. It is said to make very good hay, and sweet scented when dry, and should be cut when young, before the stalks become woody.

Melilotus officinalis has yellow flowers, blooms a month earlier than the white, and grows from two to three feet high. These clovers have fallen into bad company, being classed among the noxious weeds of Illinois, but they do not merit such treatment. It takes kindly to poor, gravelly embankments, keeping them from gullying and washing away, and by its deep roots lightens and fertilizes the soil. In localities where the honey-flow was meager, when these clovers were introduced a marked change was soon apparent. By yielding honey during drouths, brood-rearing was stimulated, and a large force of workers were reared to take advantage of the fall bloom.

On our rich prairie lands, before the advent of tiling, bees found rich pasture in wet places; but now these are drained, and subject to the plow and reaper, and the bees have only a few flowers protected by hedges and fences. Along the water-courses, where the land was subject to overflow, which left as it receded a rich deposit, promoting the growth of fall flowers, it is being drained and leveed, which cuts off a honey supply from this source.

What are we going to do about it? It would appear to be wisdom to take the subject of bee-pasturage under careful consideration. While it may be true that it does not pay to raise a crop for honey alone, it would be well to plant those that have a dual value. And there are others who cannot plant a crop of any kind, yet they could increase their bee-pasturage by judiciously sowing the seeds of honey-plants in all waste places within flight of their bees. The bee-keepers of California are re-seeding lands where the sage has been destroyed by fire.

MRS. L. HARRISON.

After the reading of Mrs. Harrison's essay, Mr. Black asked, "Does any one know of any plant that would pay to grow for honey alone?"

No decided opinions were giving on this question, but some thought that sweet clover would come nearest to filling the need in that direction. The Secretary remarked that during his stay at the World's Fair he took a trip to Compton, in Lee county, to R. Miller's, and at that time (Aug. 8) Mr. Miller had three barrels of extracted honey and 2,300 pounds of comb honey from 35 colonies of bees, and there was nothing for them to gather honey from but sweet clover, on the highways, which were lined with it, besides seven acres which Mr. Miller had sown for the bees. Mr. Miller's opinion was that his bees had gathered nearly all the honey from the sweet clover, as there was but little white clover, and there had been no linden.

An essay by Thomas G. Newman was then read by the Secretary, entitled, "Bees in Other Climes and Other Days." [See this essay on page 28.—ED.] (*Concluded next week.*)

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Bees Affected with the Diarrhea.

What can I do for bees that have the diarrhea?
E. L.

ANSWER.—Generally nothing but to fervently hope for a day to come warm enough for them to have a good flight. See that the hive is not closed up too tight, and if they are in the cellar it may be a good plan to warm up the cellar to 50° or more.

How a Queen Should Be Clipped.

On clipping queens, what is the right way—to clip two wings or only one? BELGIUM.

ANSWER.—I believe some clip four wings, and some only one. I prefer to clip the two wings on one side. It is just as good as to clip all four wings, and is easier. Moreover, you may sometime want to catch a queen by her wings. If you clip the larger wing on one side, it prevents the queen flying as much as if you clipped two, and the queen looks better; but then you cannot tell so quickly at a glance whether the queen is clipped or not.

Granulated Honey for Winter Feeding.

One thing is sure to me, that maple syrup is not good for winter food for bees: I mean positively maple syrup fed to the bees in August or September. I suppose it is a too exciting food, causing diarrhea to confined bees. I wonder whether granulated honey (that is, if you can afford to give it in preference to cane-sugar cake) would do for winter feeding (in December, January, etc.). Fearing lest it would not, I gave my bees capped honey in one-pound sections. H. D.
Montreal, Canada.

ANSWER.—Granulated honey of good quality makes good food, only the bees would waste a great deal of it.

About Moving Bees in Winter.

I am starting to keep bees, and have bought seven colonies, expecting to get them home on sleighs, but we have had no snow yet, and I do not know what to do. The hives are out on the summer stands yet. They are chaffed up to the top of the lower hive, with chaff hives over all. Now had I better wait until later for sleighing, or attempt to move them on a wagon? I have to move them about five miles on a pretty rough road. W. J. H.
St. Joseph's, Pa.

ANSWER.—If there is no necessity otherwise for removing the bees before spring, then I would wait till weather for them to fly, unless sleighing comes. But the probability is that by the time this gets into print you may have enough sleighing.

Bees Out-Doors and Dying—Sourwood.

1. Is it best to leave bees out as long as there is a day once every week or two that they can fly? I live in central Iowa. My bees are out yet, and they had a good flight yesterday (Dec. 19), and to-day also.

2. What is the cause of so many of the bees dying in some of the hives? About half of my 26 colonies have a great heap of dead in front of the entrance. If they do not stop, there will not be a bee alive in those hives by spring. I examined some of them a short time ago, and found that fully one-half the bees in each hive were dead. Why do some of the colonies die that way, and others are all right? Can the fault be with the queen? Their stores are basswood honey, of No. 1 quality, and granulated sugar syrup.

3. Will sourwood trees grow as far north as central Iowa? If so would they bloom at a different time than the linden? Is there any tree that blooms after linden that will grow this far north, that would make a nice shade tree or grove for windbreak? C. P. M.
Bangor, Iowa.

ANSWERS.—1. This has been an unusual winter, and bees left out till late are better off than they usually would be. The prospect now is that the rest of the winter will not be so mild, and I would get them into the cellar. If you were sure they would have flights every week or two, of course they would be better out.

2. Without knowing more about the case I cannot answer, and possibly I couldn't if I knew all about it that you know. It is possible that the ones that are dying off had older bees than the majority, and, on the other hand, that may have nothing to do with it. Sometimes some colonies have different stores from others, and that may make a difference.

3. I don't think sourwood will grow there, and I don't know of any good honey-tree that you could have to bloom after linden. Chestnut might be tried, which blooms later, I think, but I'm not sure. But it's no such honey-tree as linden, neither in quality nor quantity.

A Late-Reared Queen.

I bought a colony of bees three years ago last June, and they have never swarmed. Dec. 1, 1894, they carried the old queen out of the hive with her wings partly torn off. She was dead when I found her. There were no drones. If the old queen was superseded by a young one, how will she become mated to do any good next season? It is a strong colony of bees, with plenty of honey. I want to know what to do with them—whether to give them a queen or let them alone. I have never seen anything of this kind in the American Bee Journal or "A Year Among the Bees," so I thought I would write you. W. J. H.
Fortville, Ind.

ANSWER.—Better let them alone till bees begin rearing brood next spring. If there is no brood in the hive after other hives contain sealed brood, or if their brood when sealed shows by its cappings that it is all drone-brood, then your colony is queenless, or worse than queenless, and you must act accordingly. More likely, however, your colony has an all-right queen.

Colony Permits Robbing—Late Queen.

1. I have a colony of Italian bees that will not defend themselves against robbers. The bees from other colonies will come to this hive and alight right at the entrance and remain still for about a second, and then sneak in and get the honey. They do not rob it fast, but slowly. They have been robbing it for about two months every day that they can fly. I tried to unite another colony with it but failed. This colony that is being robbed killed every bee of the other colony. It has a good, young queen and is an average colony in numbers. Please tell me what to do for it.

2. I have a colony that hatched a queen just about frost, and the time the others quit laying. There were a very few drones flying when the queen was hatched. Will she come out in the spring fertilized and all right? or will she be worthless? A. T. M.
Knob Creek, N. C., Dec. 11.

ANSWERS.—1. Try closing up the entrance quite small, but look out you don't smother them. It might work to place at the entrance a piece of coarse wire cloth having three meshes to the inch, or, still better, a piece of excluder zinc.

2. Maybe, and maybe not. Let her alone till spring, then look at the first sealed brood, and if it is sealed flat, all right; but if the sealing is different from that in other hives, being more like a lot of little marbles, then you have a queen that is a fair candidate for decapitation.

Feeding and Protecting Bees in Winter.

1. Would it be a good way to put honey in a top-box and set it on the hive next the bees, for the bees to eat in winter?

2. Do they need any protection here in winter? If so, please state how it would be best to protect them? A bee-hive is only one big box, is it not? COLORADO FRIEND.

ANSWERS.—1. Generally it is not a good plan, for it is so cold that the bees will starve rather than to leave the warm

cluster to seek for food. It may be, however, that in the very mild winters of Colorado it is warm enough for them to find the food above, especially if on a warm day you pound or kick the hive to rouse them up thoroughly.

2. It will at least do no harm to cover over the tops of the hives with anything that will make them warm, old cloths or carpets, and then something over that to keep off rain, if you ever have rain in winter. A bee-hive may be only "one big box," or it may not. Most bee-hives in this country have movable combs, allowing each frame of comb to be lifted out separately, but what are called "box-hives" are nothing but a plain box in which may be cross-sticks to help support the combs, and the bees build the combs in any order to suit their fancy.

The Sunny Southland.

CONDUCTED BY

MRS. JENNIE ATCHLEY, BEEVILLE, TEX.

A New York Bee-Keeper in Texas.

FRIEND YORK:—I arrived here in "Sunny Southland" (the home of Mrs. Jennie Atchley), from Lake George, N. Y., a few days ago, to attend the midwinter bee-meeting, on Dec. 27 and 28. The indications are that we will have a large attendance at the bee-meeting. Quite a number of bee-keepers have arrived already. Mrs. Atchley has made every preparation to make it pleasant for all bee-keepers who will come to this grand midwinter bee-meeting.

The weather is fine and warm here. To-day the mercury stands at 85° above zero in the shade. The bees here are busy gathering honey from chaparral and wild currant, while my bees up at Lake George, N. Y., have been in winter quarters for six weeks, and the weather at the present time there is at zero, and the ground is white with snow. It is hard to realize the vastness of our country.

There is a vast difference between the people of the South and of the North. For instance, here in the South, on Dec. 25—Christmas—they celebrate the day by firing off sky-rockets, powder crackers, guns, etc., and taking into consideration the warm weather, it makes a man from the North here think he is celebrating the Fourth of July instead of Christmas.

After I have seen more of this country, I will let you know what I think of it. Yours truly,

Beeville, Tex., Dec. 25. F. A. LOCKHART.

A Texas Report for 1894.

MRS. ATCHLEY:—I regret very much that I cannot be at your bee-meeting. My report for 1894 is 58 colonies, spring count, $204 worth of honey, and increased to 86 colonies. I sold 9 colonies at $5 each, and have 77 colonies left.

Ennis, Tex., Dec. 21. J. L. WOOLDRIDGE.

Friend W., you have done well, and I would have been pleased to know how many pounds of honey, etc. You see we are not satisfied unless you tell it all—how many colonies, how much honey, and how much you sold for per pound. How easy it is for us to report when we have done well. I would be glad to get a report from all, let it be good, bad, or indifferent; then we could weigh all up together, and see where we stand. JENNIE ATCHLEY.

A Minnesota Bee-Woman in Texas.

MR. EDITOR:—As you see, I have followed your advice to "write Mrs. Atchley," concerning an opportunity to work among the bees and learn *all* about bee-keeping and queen-rearing for profit; and satisfactory arrangements have been made for that purpose.

I left Rochester, Minn., Wednesday, Dec. 19, at 4:30, and arrived at Beeville at 7 p.m. Saturday evening. My first supper was taken in Minnesota, breakfast in Iowa, dinner in Missouri, supper in Kansas, breakfast in Indian Territory, and dinner in north Texas. Thus we rushed along. I was met at the station by Mrs. Atchley, her brother "Charley," and Mr. Lockhart—a bee-man from Lake George, N. Y. About 8 o'clock I arrived at Mrs. Atchley's pleasant new home, and was most cordially welcomed by each member of the family, and hospitably entertained in the genial "Southern style." Monday evening, W. R. Graham arrived—a bee-man from Greenville, Tex. Mr. Graham's son is in Mrs. Atchley's employ.

To-day—Christmas—it was 66° above zero in the morning, and at 85° at midday; with flies and butterflies, the hum of bees, and the familiar chirrup of the cricket, it does not seem like Christmas to a Northerner. To add to the strangeness of the scene, we pluck orange blossoms and ripe fruit. Cacti flourish in abundant profusion, while the live-oak, mistletoe and trailing mosses hanging from the boughs, add to the summerlike appearance of Christmas.

Many bee-men will arrive Wednesday, and be entertained by the hospitable, genial Beeville citizens. The Aransas Pass Railway Company have arranged a free excursion to Corpus Christi, while the generous people provide a free oyster supper for the delegates at the Southern bee-convention.

Beeville, Tex., Dec. 25. ELLA HOWARD.

Another Report for the Past Season.

MRS. ATCHLEY:—My report is as follows for 1894: extracted 60 pounds of honey per colony, on an average, and the bees swarmed until the last of September. They are still gathering honey at this writing—Oct. 10. Also, I send you a sketch of my bee-escape. T. V. DICKSON.

Cedar Creek, Tex.

Friend D., you have sent in a good report, but do you know that we bee-keepers are always anxious to know how many colonies a report covers? We are very anxious to know this, as a few colonies may give a large yield in a given location, and a large apiary may starve out. I cannot quite understand your Star bee-escape, but I do not see why it should not work well, as it looks all right.

JENNIE ATCHLEY.

South Texas and the 5-Banded Bees.

EDITOR YORK:—Having arrived in Beeville about a week ago, and finding the country so very different from that in middle Texas, I am ready to testify to the truth of statements made by Mrs. Atchley regarding the orange orchards in this county. There are several orange orchards in Beeville, and the trees are loaded with fruit. There are green beans in the gardens, which the whole Midwinter Bee-Keepers' Convention can see. The bees are working on chaparral blossoms. I have examined the bees, and find many colonies with sealed brood, which is a thing never known at this time of the year in middle Texas. (I live at Chriesman, Tex.)

This is no doubt the bee-paradise of this continent. There is only one obstacle in the way, and that is the moth-worm, which is a more troublesome here than in the cooler portions of this State. But as the Italian blood is getting pretty well infused, there will not be any very great loss from that source. All the knowledge required to make the production of extracted honey a success in this country is to select a good, practical hive, straight combs, to keep the bees pure Italians, or as nearly pure as possible. The 5-banded bees are the best in this climate, having tested the matter thoroughly for the past four years, for both comb and extracted honey.

I am inclined to the belief that the 5-banded bees are being unjustly condemned. There are many sorry queens sent out, no doubt, as there is a greater demand for them than there is for any other strain; the crowded breeder cannot make the proper selection, and give the attention to having the cells properly developed, as he would if orders were coming in sparingly. Only a queen-breeder knows how to sympathize with queen-breeders. C. B. BANKSTON.

Beeville, Tex., Dec. 25.

Severe Frosts in Florida.

Mrs. L. Harrison—the noted writer on bees in the North—is in Florida for the winter, as usual. In a letter dated Dec. 31, 1894, she says:

EDITOR YORK:—The last day of the year finds me in "the Sunny Southland," but severe frosts on the nights of Dec. 27, 28 and 29, have changed the face of nature, from living green to brown and sere. A self-registering thermometer registered 15° above zero, on the night of Dec. 28. Many pear-trees were loaded with a second growth of fruit, and roses were a thing of beauty, but now they hang their heads.

MRS. L. HARRISON.

St. Andrew's Bay, Fla., Dec. 31.

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MRS. JENNIE ATCHLEY - - - "THE SUNNY SOUTHLAND."
"GLEANER" - - - - "AMONG THE BEE-PAPERS."
"BEE-MASTER" - - - - - "CANADIAN BEEDOM."
DR. F. L. PEIRO - - - - - "DOCTOR'S HINTS."

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Editorial Comments.

The Poet-Laureate of Bee-Keeping is a title that in years agone was quite appropriately applied to Hon. Eugene Secor, of Forest City, Iowa. On Jan. 1, I received a dainty poem from him, which though not exactly relating to bees, yet may prove to be a be(e)atitude to all who read it. Here it is:

ANOTHER MILE-POST REACHED.

One by one the years go by—
Let them go—
What care we? My love and I
To and fro
Have walked so far together,
We fear not change of weather.

Let the whit'ning frosts of Time
Turn our hair;
Age with gladness is not crime—
We don't care;
My love and I still linger,
And laugh at Time's grim finger.

Ring in the year of Ninety-Five—
Ring it in!
Love and hope are still alive—
They will win.
We give the new year greeting,
And bless the one that's fleeting.

Forest City, Iowa, Dec. 31. EUGENE SECOR.

Institute Work and Bees.—Prof. Cook, writing from Claremont, Calif., Dec. 29, 1894, says:

I am now in full charge of Institutes in Southern California, and talk bees at every meeting. People listen and believe. I am sure it will do much good, for my talks on bees are received with evident respect. A. J. COOK.

Bee-keepers will be pleased to learn the above, for it is bound to result in great good to the industry. Other States should "follow suit."

The Canadian Bee Journal was the first of the bee-papers to reach this office in 1895—it came Jan. 2. Editor Holtermann is improving his paper from number to number. Bee-keepers everywhere could, and should, read it with much profit. Almost without exception, the bee-papers are worth many times the price asked for them. I doubt whether any other industry, of similar extent, can show as clean and helpful literature. And yet the limit of improvement is not yet attained—probably never will be. But I think I know about six bee-editors that will keep on *trying* to make their publications what they should be. I might say that one of the six pushes this pencil.

The North American and Bee-Master.—Referring to an utterance on page 10, I have received the following, which is self-explanatory:

MR. EDITOR:—Please say to the man with the facile pen, that looks after matters in "Canadian Beedom," that some one has been misinforming him. There never was any "practical exclusion from all membership" of Canadians in the North American Bee-Keepers' Association. There never was any attempt at it. There never was any desire for it. It is not true that "the legal change in the constitution was the work of a very few individuals," any more than it is true that any act done upon vote of the Association at any regular meeting is the work of a few individuals. That "centralization scheme" never had any existence except in a diseased imagination. Some one has been "stuffing" Bee-Master. Tell him that he's away off in that matter, and that those who were specially active at Keokuk in securing the constitutional change were the very ones who were most active at St. Joseph in trying to have the convention at Toronto this year. There are splendid men in the ranks of our northern friends, and we think a lot of them. ONE WHO WAS THERE.

I am very glad to give the above correction a place here, and I want to thank "One Who Was There" for the kindness shown.

Besides apologizing for publishing the two sentences referred to, on page 10, I want to say that I think it was a most absurd thing for any one to *imagine* that Canadian Bee-keepers were *excluded* from membership in the North American when the Association voted to have itself incorporated. Only a chronic faultfinder would ever *think* of such a thing, much less *believe* it.

Agreeing exactly with "One Who Was There," and knowing the clear truth of the statements made in what that writer says above, I want to say that this matter will end right here, so far as the American Bee Journal is concerned. It is too ridiculously insifinificant a matter about which to waste more breath or space. *If* there is any "feeling" at all on the subject, it is entirely on the Canadian side—quite likely on the part of only a very few—and I feel sure that after those "few" enjoy the Toronto meeting this year, they, too, will be ready to unite heartily in "Blest be the Tie that Binds."

LATER.—A letter received from Bee-Master, says that in his article on page 10, where it reads "practical exclusion from *all* membership," it should be "from *full* membership." And I find upon referring to the original copy, he is correct—it is plainly written "full." But, nevertheless, it was *all* a mistake to refer to the matter in any way in the first place. But the thing won't be raked up again very soon, in these columns—not if this chap keeps his right mind.

The Langstroth Fund has not received much attention, or money, lately. But here is something that is very refreshing, and which I commend to all who wish to help Father Langstroth in his declining years:

DUNLAP, Iowa, Dec. 19, 1894.

MR. GEORGE W. YORK.—*Dear Sir:* Enclosed you will find $5.30 to the Langstroth fund. You may remember that I promised last spring the proceeds of one colony of bees to that fund. I set aside what I thought to all appearances was the best colony of the 50 colonies I had, but though it did not prove to be the best, it counted in some, as it produced 30 sections of comb honey, which I have sold at 15 cents each, and 10 pounds of extracted, at 8 cents, making in all $5.30.

Now, I verily believe, if I had not given that donation to Father Langstroth I might not have had a pound of honey this year; but, as it is, I have 1,500 pounds of nice honey. If God did not bless me, then the credit is all due to Father Langstroth.

The honey was produced in one of his old pattern 10-frame hives, with his frames, and by his bees—that I loaned to him last spring. I wish it was 100 pounds. Respectfully yours,

E. J. CRONKLETON.

Now, why cannot others "go and do likewise?" Where can be found a better way to help on the fund for Father Langstroth—the "grand old man" of American apiculture? How his heart must be gladdened when receiving the $5.30 so kindly donated by Mr. Cronkleton! We hope that another year many may follow Mr. C.'s example, so that by another winter the Langstroth Fund will be ample to care nicely for Father L. during the succeeding year.

Any Person who is cautious, observing and prompt, will succeed in bee-keeping.—Prof. Cook.

Among the Bee-Papers

Conducted by "GLEANER."

AN EXPERIMENT WITH APIS DORSATA.

P. Baldensperger writes to the British Bee Journal in a way that would seem to make it a matter of folly to make any further attempt to domesticate apis dorsata. Twelve years ago R. Dathe secured several colonies of these bees, part of which Baldensperger had for almost a year in orange groves in Joppa, in Syria, and although effort was made to have things to the taste of these giant bees, their nests not being enclosed, yet they never built a cell, and finally died without leaving an egg or a comb. He refers to Cheshire, who says it is "in the very nature of things impracticable to hybridize our hive-bees with dorsata." It is migratory in habit. Moreover, Cheshire argues strongly that increased size is a disadvantage, smaller animals being proportionally more efficient, and a certain relation must exist between the size of the bee and the flower. But if we could have bees with tongues long enough to fit red clover, there might be a gain.

CANDLES FOR FASTENING FOUNDATION.

European journals give a plan for fastening foundation in brood-combs that is said to be a great success. A candle 2 to 2½ inches in diameter is made of beeswax, generally by wrapping scraps of warmed foundation about a very slender wick such as is found in toy candles or tapers. Cut square at the lower end, so it will stand without a candlestick. Light the candle, then when a little pool of melted wax has formed about the wick, hold the candle to one side and let the drops of melted wax fall where you want to fasten the foundation. Advantages claimed: rapidity, no previous preparation, solid work. One paper recommends using a tin tube to slip down a half inch upon the candle.

"ADEL" QUEENS ARE SIMPLY "SELECT."

It is to be sincerely hoped that the term "Adel queens," as mentioned on page 783 in the St. Joseph report, may not become current among bee-keepers. Where did it ever appear, anyhow, before coming up at that convention? It's all right to borrow a word from another language when it's needed, but where under the sun is there any need for such a word as Adel? Mr. Benton says, "*Select* queens of any well-established race or variety may properly be called Adel queens." From which we may judge that "Adel" is simply to take the place of "select." And for what good? Suppose that for any reason such a word were needed, why travel off to Germany to borrow a word when we have a good English word that means precisely the same thing? If any one is pining to multiply terms, let him say "noble," not "Adel." But where's the need of either?

A HALF MILE OF EGGS.

A bee's egg is 1/14 inch long and 1/70 in diameter—five times as long as it is thick. A queen isn't very much of a queen if she can't lay half a mile of eggs in her lifetime. [This seems like a big whopper of a statement; but perhaps it is all right. To verify it with figures scares me: so I'll try to swallow it, since it is dished up by Dr. Miller.—ED.]—Stray Straws.

TERMS FOR PLACING OUT-APIARIES.

E. France gives in Gleanings the terms on which he places his out-apiaries, thus: "We give 25 cents a year for each colony that we have on the ground, spring count, counting them about the last of May, or at a time when we are sure there won't be a less number. The land-owner has nothing to do with the bees, except, if anything happens that requires our attention, he is to let us know, and we look after them. There is no watching for swarms, and no swarms to hive." Pretty good rent for land, isn't it?

FRANCE'S MANAGEMENT OF OUT-APIARIES.

It's always interesting to hear how one manages to run an apiary without watching for swarms. Here's how E. France tells in Gleanings his plan with an out-apiary run for extracted honey, with clipped queens. Colonies are wintered in two stories, the upper story being filled solid with honey. At fruit-bloom the brood-nest will be found in the upper story. Colonies that have the upper story filled with brood must have all brood put in lower stories, filling upper stories with empty combs. The same thing is done ten days later, and ten days later still. Any colony that has more than enough brood to fill the lower story, has the extra frames of brood taken away. Use these extra combs to strengthen weaker colonies, and when not needed for this purpose, make new colonies with them, using enough brood and bees to make each new colony very strong, taking brood and bees from several hives. No old colony must be left with queen-cells. At this third visit extract, so as to get the dark honey out of the way, put on the third story, and extract once a week, keeping the brood below and extracting from the upper two stories. Stop extracting in time to let the bees fill the upper story solid for winter, and if they get more than that, extract it in September.

Canadian Beedom.

Conducted by "BEE-MASTER."

Program for the Ontario Bee-Keepers' Association Meeting.

The following is the program arranged for the annual meeting of the Ontario Bee-Keepers' Association, which will be held in the county council chamber of the Court House, at Stratford, Ont., Jan. 22, 23 and 24, 1895:

Vice-Pres. Holtermann will give a lecture on the evening of the 23rd, illustrated by lime-light views. W. Z. Hutchinson, of Flint, Mich., will read an essay, subject, "Will the Future of Bee-Keeping Differ from the Past?" Pres. A. Picket, of Nassagaweya, will give an address. R. McKnight, of Owen Sound, will assist in making the evenings pleasant by an address on something instructive. Allen Pringle, of Selby, will read an essay on "Education." A. E. Sherrington, of Walkerton, will read an essay on "Conventions." John Myers, of Stratford, will read an essay on some practical subject. F. A. Gemmill, of Stratford, will give an address. J. K. Darling, of Almonte, will read an essay on "Some Difficulties."

We are pleased to announce that the Hon. John Dryden, Provincial Minister of Agriculture, will be present, and no doubt will add greatly to the interest of the meetings. The following are also expected to be present during the convention: Prof. Fletcher and Mr. James Fixter, of the Dominion Experimental Farm, Mr. C. C. James, Deputy Minister of Agriculture of the Province, and E. R. Root, of Medina, Ohio.

Messrs. Gemmill and Myers, of Stratford, are arranging with local and other artists for musical and literary entertainments at intervals during the evening sessions.

Arrangements have been made with the proprietors of the Windsor Hotel, the best in the city, at the rate of $1.00 per day for persons attending the convention.

Members and others are particularly requested to procure from the railroad agent at your starting-point a delegate's certificate on purchasing a full-fare single ticket to the convention, so that if there are 50 persons who attend holding certificates, there will be a rate of ⅓ single fare allowed by the railroad for returning, to those holding certificates. By all getting certificates it may mean quite a saving to private parties as well as the Association. If there are not 50 certificates presented the return rate will be ⅔ single fare.

All persons interested in bee-culture are cordially invited to attend, as it is expected that this will be one of the most interesting and instructive conventions the Association has ever held.

W. COUSE, *Sec.*

Streetsville, Ont.

Bee-Keeping in Ontario—Its Prospects and Possibilities.

Read at the Brockville Bee-Keepers' Convention

BY ALLEN PRINGLE.

I notice the subject you have me down for is a large one, viz.: "Bee-keeping in Ontario—Its Prospects, Possibilities, Etc." Without time at present for hunting figures, or even for reflection, I shall merely give you such thoughts on the subject as may occur to me while I write. As to the present status of bee-keeping in Ontario, the achievements of the Province at the great Columbian Exposition at Chicago, last year, tell their own tale in a manner so creditable as to inspire the bee-keepers of this Province with honest and laudable pride. I had the privilege and honor of representing them on that occasion, and know whereof I affirm, when I say

that no honey from any quarter of the globe surpassed in excellence the Ontario honey, while very little equaled it. Of all the States and Countries exhibiting honey there, Ontario came out away ahead, taking twice as many awards as the best of them, and from five to ten times as many as the most of them. While I expected much from my native Province, this greatly surpassed my expectations. Ontario may be safely written down as a land "flowing with milk and honey." Our cheese, as well as our honey, was the best at the World's Fair. Ontario has climate, as well as the flora, for producing the best. The linden, the clover, the thistle, the raspberry, the maple, the willow, the sumac, the buckwheat, the golden-rod, and numerous other plants yield abundantly.

Judging from the area within my own personal knowledge, the output of honey in Ontario must have quadrupled within the past decade, and the consumption has kept corresponding pace, as but little is yet exported. The people generally are beginning to use it as an article of food; and what was in fact a luxury, and is so in reality, is fast becoming a staple on our tables. This is as it should be, as pure honey is not only wholesome and palatable, but more easily digested than most other sweets. Its medicinal qualities also in various affections of the throat, lungs and bowels, go far in warranting us to follow the poet's advice to "throw physic to the dogs." No argument, however, we can make use of—whether physiological or economic—will be half as persuasive or potent to induce the masses to eat honey, as their own palates, because appetite instead of reason, is yet unfortunately king among men and women, with the exception of the precious few. The honey is "good to take," and superbly pleasant to the palate, and that is enough for them whenever they can get it! And the price being comparatively low, and quite within their reach, the consumption is bound to still further increase, provided we continue in Canada to furnish a good and pure article. This latter consideration is a very important one in these days of food adulteration and commercial frauds. Our honey must be kept pure at any cost, and any and every species of adulteration (or rather attempt at adulteration) frowned down and stamped out.

At Chicago, I was greatly astonished to find the suspicions of adulteration of honey—especially extracted honey—so prevalent and wide-spread among consumers. And this suspicion undoubtedly not altogether without substantial foundation, though it must be stated in justice to the producers, to the bee-keepers of the United States, that the onus of adulteration rests with the dealers rather than the producers. But the fact of adulteration is there, and the want of confidence is there; and that fact, together with superior quality, was the reason why I was able to sell our Ontario exhibit of honey at Chicago, after the Exposition, at prices considerably above those commanded by the home product. The character and quality of our honey is so good that its reputation is high both at home and abroad. Let us preserve and maintain this good name by taking and handling our honey in a proper manner, and by watching and putting down the first sign of adulteration.

The proper taking and handling of honey means, in the first place, allowing it to ripen in the hives before removing it, or, when this is practicable, as it occasonally is, thoroughly ripening it after it is removed, and in the second place, never putting it on the market unripe, untidy, or unclean.

Bee-keepers, as a rule, are intelligent, moral, neat and clean, but I have seen in my time a few slovenly ones who were a disgrace to the whole fraternity. This stricture is mostly applicable to those old-fashioned one-horse coveys who still use the box-hive in the summer, and fire and brimstone in the fall, and cut out honey, bee-bread, young bees, dead bees and all, and take this apiarian mush to market in old tin-pails and pans, and take what price they can get for it; or mash the whole up, strain it, and market it in that shape. This is bee-keeping with a vengeance, and, of course, Ontario, like every other country, has a few such bee-keepers. But they are gradually diminishing, and must in time disappear along with other antique excrescences. But there is another side to this picture. Ontario has many first-class apiarists, and a few equal to any anywhere in the world, and these are constantly increasing in numbers.

As to the prospects and possibilities of bee-culture in this Province, the prospects are that bee-keepers will continue to multiply, and the industry continue to grow, until the ground in the habitable parts is pretty well occupied. This growth will probably not be so much in the direction of specialism as bee-keeping in conjunction with farming, gardening, fruit-raising, etc. Bee-keeping, as an exclusive business, is hardly safe except in the hands of a master who is favorably situated as to locality for forage. The business has its ups and downs, and its failures. One of these overtook the bee-industry the past season, as you no doubt know. In Ontario, as a whole, there is perhaps not more than a third of an average crop, while in many of the States of the Union the returns are much less. From a letter now before me from a leading bee-keeper in Nova Scotia, he says, "Clover yielded no honey here this season." The clover seems to have been pretty badly spring and winter killed the past season over a wide area on this continent, and this supplemented by the severe and wide-spread drouth, left the crop of light honey very short. The drouth extended so far into the fall as to also seriously affect the fall flow of honey, as buckwheat, which is the fall staple in many parts, only yielded moderately.

The question as to whether it would pay the bee-keeper, who has land at his disposal, to sow or plant specially for honey, is one much discussed and seriously considered in localities where failure of the honey crop is frequent. There seems to have been but little experimentation to settle the matter practically, and hence the divergence of opinion on the subject. My own opinion, which is founded on experience so far at least as two of the honey-plants are concerned, is that it pays the bee-keeper who can do so, to sow and plant three honey-producers, viz.: Alsike clover, buckwheat and basswood, or linden. I have been sowing Alsike and buckwheat for many years for honey, and both have paid well. These two plants hardly ever fail to yield nectar, while the white clover, which, as you know, grows spontoncously, often fails. Then we have the double crop from them—hay and honey from one, and grain and honey from the other. While the red clover often fails to produce a crop of seed, the Alsike scarcely ever so fails, owing chiefly to the fact that the latter seeds in the first crop, while the red seeds in the second. Moreover, the Alsike seed always commands a higher price in the market than the red. Of course you cannot have good hay and seed both in the same season from Alsike, but sometimes you can have seed and a straw quality of feed simultaneously from it, in which case there is a treble crop, viz.: honey, seed, feed.

As for the linden tree, I am greatly in favor of planting it for honey, and have practiced my preaching by planting some 700 to 800. They are not blooming yet, but I expect to see them bloom. My advice, then, to all bee-keepers in localities where the tree is not plentiful in the woodland, is to plant basswood. If you do not feel like affording field land for the purpose, plant along the fences and highways—but plant somewhere. I planted 400 in good field land. The linden is a beautiful shade-tree, is a rapid grower, and hardy; and if we cannot make axe-handles and whiffletrees out of the wood, we can use it profitably in cabinet and other work. One of the ways to enhance the prospects and possibilities of bee-culture in Ontario, is for every bee-keeper who can, to plant basswood, and he will not only be serving himself, but posterity, as one chief cause of the severe drouths which Canada with other countries is beginning to experience, is the rapid disappearance of trees from our portion of the earth's surface.

Selby, Ont.

Bee-Keepers' Entertainment—A Novel Scheme.

Preparations are being made in earnest for making the convention of the Ontario Bee-Keepers' Association at Stratford, on Jan. 22, 23 and 24, the best of its kind yet held in the Province. Besides what Messrs. Myers, Picket, Holtermann and Couse are doing, I understand Mr. Gemmill, its former President, is working hard to see his pet scheme fully carried out. It is the giving of a Concert or Educational Entertainment, as he calls it, and his object is to bring before the public more thoroughly the benefits that accrue from the use of honey as a food. He claims, if I understand him rightly, that while bee-literature is doing much to enlighten the public on this point, that it would be well to give an Entertainment with proper inducements to get those who are not honey-producers themselves to attend, so that the usefulness of honey can be more thoroughly impressed on their memories. The method he would advise, and intends to follow when the Association meets in his own city, is about as follows:

Instead of having a little local and instrumental music during the regular sessions alone, he believes in having a hall or room for a public Concert or Educational Entertainment, and one evening devoted by both bee-keepers and the public to this and nothing else. That the idea is a good one I thoroughly believe, and I have learned that the citizens of Stratford quite agree with him, the Collegiate Institute School Board being so much taken with the idea from an educational standpoint, that the lecture room containing a piano and magic-lantern was willingly offered gratis for the occasion.

The programme will consist of vocal and instrumental

music of good quality, and suited for such an occasion, with appropriate addresses by some bee-keepers of note and ability; a good lecture, and magic-lantern exhibition, illustrating the bee when dissected, and showing how bees secrete wax, build honey-combs, gather and store honey, fertilize flowers, and how and why people get stung when they don't want to, etc. Mr. Gemmill has composed words for a song suitable for the occasion.

WM. MCEVOY, Woodburn, Ont.

CONVENTION DIRECTORY.

Time and place of meeting.

1895.

Jan. 21, 22 —Colorada State, at Denver, Colo. H. Knight, Sec., Littleton, Colo.

Jan. 22-24.—Ontario, at Stratford, Ont. W. Couse, Sec., Streetville, Ont.

Jan. 25, 26.—Ontario Co., at Canandaigua. Ruth E. Taylor, Sec., Bellona, N. Y.

Jan. 28.—Venango Co., at Franklin, Pa. C. S. Pizer, Sec., Franklin, Pa.

Jan. 30, 31.—Vermont, at Middlebury, Vt. H. W. Scott, Sec., Barre, Vt.

Feb. 6, 7.—Wisconsin, at Madison, Wis. J. W. Vance, Cor. Sec., Madison, Wis.

Mar. 16.—S. E Kansas, at Bronson, Kan. J. C. Balch, Sec., Bronson, Kan.

May 6.—Southern Minnesota, at LaCrescent, E. C. Cornwell, Sec., Winona, Minn.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

OFFICERS FOR 1895.

PRES.—R. F. Holtermann.....Brantford, Ont.
VICE-PRES.—L. D Stilson.....York, Nebr.
SECRETARY.—W. Z. Hutchinson...Flint, Mich.
TREASURER.—J. T. Calvert.....Medina, Ohio.

National Bee-Keepers' Union.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
GEN'L MANAGER—T. G. Newman, Chicago, Ill. 147 South Western Avenue.

Most Valuable for Advertising.—Unsolicited testimonials to the value of any article are always the most appreciated, and should carry with them a force that is convincing. Such is the following, which we received recently from Chas. Dadant & Son—the world-renowned makers of comb foundation:

FRIEND YORK:—Although the number of answers to advertisements is more limited than ever this year, we find that the American Bee Journal is right up—none ahead—in the number of new names furnished. As the editor of the American Bee Journal is not interested in the sale of implements, that fact makes the American Bee Journal, in our eyes, the most valuable advertising medium to-day for us Westerners, at least.

CHAS. DADANT & SON.

Hamilton, Ills., Dec. 5, 1894.

The above firm keep a standing advertisement in all the leading bee-papers, and so they are competent to speak on the subject. As we have said before, *continuous advertising pays.* Try it, if you wish to succeed.

Sample Copies of the "American Bee Journal" will be mailed free to all who ask for them. The next three or four months will be just the time for getting new subscribers, and if any of our friends can use sample copies among their bee-keeping neighbors, in order to get them as new subscribers, we will be glad to mail the samples, if the names and addresses are sent to us. Better educated bee-keepers will mean better things for all.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Dec. 27.—Up to the present the sales on honey have met with our expectations. We have received considerably more honey than we figured on handling, owing to the short crop report, and we think the early shippers reaped the benefit. However, we are now getting the average price, viz.: Fancy, 15c.; white, No. 1, 14@13c. Extracted, 6@7c. Beeswax, 28@29c. J. A. L.

CHICAGO, ILL., Jan. 3.—As usual, the volume of trade in honey is small at this season. But our stock is not heavy, and soon as this month is past we expect a demand that will clean out all present and prospective offerings. Comb sells at 14c. for good white; fancy brings 15c.; dark grades, 8@12c. Extracted white, 6@7c.; dark, 5@6c.
Beeswax, 27@28c. R. A. B. & Co.

NEW YORK, N. Y., Dec. 20.—The market for comb and extracted honey is good, and the supply equals the demand. Fancy clover and buckwheat sells best; off grades are not quite as salable; and 2-pound sections are little called for. We quote as follows: 1-pound fancy clover, 13@14c.; 2-pound, 12½@13c.; 1-pound white, 12@12½c.; 2-pound, 12c.; 1-pound fair, 10@11c.; 2-pound, 10@11c.; 1-pound buckwheat, 10@11c.; 2-pound, 9@10c. Extracted, clover and basswood, 6@6½c.; buckwheat, 5@5½c.; Southern, 50@60c. per gallon. Beeswax, scarce and in good demand at 29@30c. C. I. & B.

CINCINNATI, O., Dec. 21.—No change since our last. The market is quiet, with a fair demand at 14@16c. for best white comb honey, and 4@7c. for extracted.
Beeswax is in good demand at 22@27c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, MO., Dec. 26.—The supply of comb honey is fair; demand is fair. Supply of extracted is good; demand light. We quote: 1-lbs., No. 1 white, 14@15c.; No. 2 white, 12@13c.; No. 1 amber, 13@14c.; No. 2 amber, 10@11c. Extracted, white, 6@7c.; amber, 5½@6c.; dark, 4½@5c.
Beeswax, 22@25c. C. C. C. & Co.

ALBANY, N. Y., Dec. 26.—Honey in better demand, especially the high grades of white comb honey. We quote: No. 1 white, 14@15c.; No. 2 white, 13@14c.; Mixed white, 11@12c.; No. 1 buckwheat, 12@12½c.; No. 2 buckwheat, 11@11½c.; common, 10@11c. Extracted, white (Northern), 7@8c.; amber, @6½c.; buckwheat, 5½@6c. Beeswax, 27@29c. Do not look for much of any change in these prices, and advise now to have honey on the market as early as possible for best prices. H. R. W.

BUFFALO, N. Y., Dec. 17.—The demand for honey is very quiet. We quote: Fancy, 13@14c.; choice, 11@12c.; others from 8@10c. Literal amount of stock in market. The prospects are that the demand will be very light until after the holidays. Extracted is moving very slowly at 5@7c. B. & Co.

NEW YORK, N. Y., Dec. 31.—The demand for comb honey has been very light of late and has now almost dwindled down to nothing. The supply has been accumulating and there is a large stock on the market. In order to move it in round lots, it will be necessary to make liberal concessions from ruling quotations. We quote: Fancy white, 1-lbs., 13c.; off grades, 11c.; buckwheat, 9c. We have nothing new to report in extracted. It is moving off slow and plenty of stock on the market, with more arriving. Beeswax is steady and finds ready sale on arrival at 30c. per pound. H. B. & S.

RUDY'S PILE SUPPOSITORY

Is guaranteed to cure Piles and Constipation, or money refunded. 50 cents per box. Send two stamps for circular and free Sample to MARTIN RUDY, Registered Pharmacist, Lancaster, Pa. NO POSTALS ANSWERED. For sale by all first-class druggists everywhere. Peter Van Schaack & Sons, Robt. Stevenson & Co., Morrison, Plummer & Co., and Lord, Owen & Co., Wholesale Agents, Chicago, Ills.
Pease mentiou the Bee Journal. Nov15

Great Premiums on page 33!

Convention Notices.

COLORADO.—The 15th annual meeting of the Colorado State Bee-Keepers' Association will be held on Monday and Tuesday, Jan. 21 and 22, 1895, in Denver. H. KNIGHT, Sec.
Littleton, Oolo.

NEW YORK.—The annual meeting of the Ontario Co., N. Y., Bee-Keepers' Association will be held in Canandaigua, N. Y., Jan. 25 and 26, 1895. Come early. Everyone come.
Bellona, N. Y. RUTH E. TAYLOR, Sec.

ONTARIO, CANADA.—The annual meeting of the Ontario Bee-Keepers' Association will be held at Stratford, Jan. 22, 23 and 24, 1895. All bee-keepers are cordially invited to attend. W. COUSE, Sec.
Streetsville, Ont.

MINNESOTA.—The regular semi-annual meeting of the Southern Minnesota Bee-Keepers' Association will be held on the first Monday in May, 1895, at LaCrescent, Minn. All bee-keepers invited. E. C. CORNWELL, Sec.
Winona, Minn.

PENNSYLVANIA.—The Venango County Bee-Keepers' Association of northwestern Pennsylvania will hold their 2nd annual meeting in the City Hall at Franklin, Pa., on Jan. 28, 1895, at 1 o'clock p.m. All interested send for program. C. S. PIZER, Sec.
Franklin, Pa.

WISCONSIN.—The 11th annual meeting of the Wisconsin State Bee-Keepers' Association will be held in the Capitol, at Madison, Feb. 6 and 7, 1895. All bee-keepers are requested to attend, whether they receive a formal notice or not. H. LATHROP, Rec. Sec.
Browntown, Wis.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association on March 16, 1895, at Goodno's Hall, in Bronson, Bourbon Co., Kans. It is the annual meeting, and all members are requested to be present, and all bee-keepers are cordially invited. J. C. BALCH, Sec.
Bronson, Kans.

VERMONT.—The next annual convention of the Vermont Bee-Keepers' Association will be held in Middlebury, Vt., on Jan. 30 and 31, 1895. Programs will be prepared and mailed later. Let every Vermont bee-keeper begin NOW to prepare to attend, and all those who can reach Middlebury, whether you live in Vermont or not, we want you to come.
Barre, Vt. H. W. SCOTT, Sec.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

J. A. LAMON, 43 South Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 28 & 30 West Broadway.
CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.
FRANCIS H. LEGGETT & Co., 128 Franklin St.

Kansas City, Mo.

CLEMONS-MASON COM. CO., 423 Walnut St.

Albany, N. Y.

H. R. WRIGHT, 326 & 328 Broadway.

Buffalo, N. Y.

BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

☞ "I have taken the American Bee Journal only about ten months, but I am well satisfied with it. I cannot see how any bee-keeper can do without it, unless he thinks there is nothing more to learn."—Geo. A. Forgerson, of Minnesota, Dec. 24 1894.

Bees in Other Climes and Other Days.

Address for the Illinois State Convention.

BY THOMAS G. NEWMAN.

To those who attend Conventions, as well as other devotees of this interesting pursuit, Bees and Bee-Keeping are all-important themes, no matter what phase is presented.

The management of these busy little insects "for pleasure and profit," will no doubt receive a thorough investigation and discussion, by those who are fortunate enough to be present; but as that pleasure is denied me, I will offer a few remarks upon the theme assigned to me, feeling assured that they will prove interesting, not only to those at the Convention, but to the thousands who may read the report of the proceedings of the Association.

If I commence by stating that bees have been domesticated for thousands of years, it would be interesting to many, but I shall go farther back than that, for this useful insect can be traced into pre-historic times—into the remote eras of the Earth's development—even before the elevation of the Alps in Europe. For remains of fossil organisms there found, demonstrate that before these gigantic mountains were lifted heavenward, there existed a sub-tropical climate with a temperature of 60 to 70 degrees, where now the eternally snow-capped mountains of Switzerland are found. There, away in the upper miocene—the middle division of the tertiary strata—have been found the petrified remains of apis melifica (our domestic honey-bees) as well as honey-producing flowers, and some bee-enemies, or bee-killers, as they are often called.

In the "fifth day" of the great Creative period, it is said that insects were created to "fly above the earth." Each "day" (or Creative period) was in all probability a thousand years, and the honey-bees were, therefore, created at least a thousand years before the advent of the human race upon this planet! To find them gathering the nectar from the flowers in Central Europe, long before the elevation of the Alps, or the creation of man, is not strange, though that fact was unknown until this late day.

Again, at the dawning of history, the honey-bee is mentioned and extolled. Palestine, 4,000 years ago, was said to be "a land flowing with milk and honey." In the mythology of the Greeks and Romans, the bee occupied a distinguished place. In the mythic traditions of the "Saga" period, among the Norsemen, the legends are full of them.

The Greeks and Romans prepared for them habitations, and dedicated them to their gods, or the decendants of their fancied deities.

At Thebes, an ancient city destroyed by Achilles in the Trojan war, there was found a bee-hive beautifully carved on a tomb.

In the Koran, the Sacred book of the Bedouins, by their prophet Mahomet, it is recorded that honey was a favorite article both for food and medicine. Curiously enough, Mahomet avers that the only creature the Lord ever addressed was the busy honey-bee, viz: "The Lord spake by inspiration to the bee, saying: Provide thee houses in the mountains and in the trees, and of those materials wherewith men build hives for thee."

These hives, as shown by all the ancient relicts, were made of cylinders of clay, such as are in general use to-day in all the oriental countries.

In early history bees are mentioned as located on the Coasts and Islands of the Mediterranean and Black Seas, and in the interior of the Continents of Asia, Africa and Europe. They are said to be indigenous in Syria, Greece, Italy, Egypt, Sicily, Germany and Gaul.

The earliest mention of honey as an article of commerce is, that the Jews were engaged in trading it at Tyre, that old and honored mart of trade, in Phenicia.—Ezek. xxvii. 17.

Not until the seventh thousand years after the creation of the honey-bees, did man commence to scientifically manage them. It required patient study and close observation to accomplish anything in that direction.

We are vastly indebted to many master minds in Europe for the patient study of their habits, and to the inventive genius of Father Langstroth, in our own country, for the production of a hive suitable for practical and successful management, which has revolutionized former practice and methods the world over, and made honey-production a science. All honor to that "grand old man"—the father of American apiculture.

Chicago, Ill., Nov. 10, 1894.

HONEY FOR SALE A No. 1 Fall Honey for sale; 3 distinct flavors—Smartweed (or heart's-ease), Aster & Spanish-Need e. Price, 7 cts. per lb. F. O. B. in 60-lb. cans. Sample by mail on application. Address, P. O. Box 783.
1A2 **E. T. Flanagan, Belleville, Ill.**
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Cuts clean on all sides-does not crush. The most humane, rapid and durable knife made, fully warranted. Highest World's Fair Award. Descriptive Circulars Free.
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Agents to sell our new book, **Dictionary of United States History**, by Prof. J. Franklin Jameson. Needed by every teacher, pupil and family; indorsed by press and public. Agents selling 50 books per week. Successful agents will be made general agents. **Big Pay**
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$45.00, and 27 other styles. All attachments FREE. We pay freight ship anywhere on 30 days free trial, in any home without asking one cent in advance. Buy from factory. Save agents large profits. Over 100,000 in use. Catalogue and testimonials Free. Write at once. Address (in full), CASH BUYERS' UNION,
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John Bauscher, Jr., P. O. Box 5 Freeport, Ill.
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As we shall have some INTERESTING ANNOUNCEMENTS to make from time to time, and it may mean dollars to YOU.

Our 1895 Catalog

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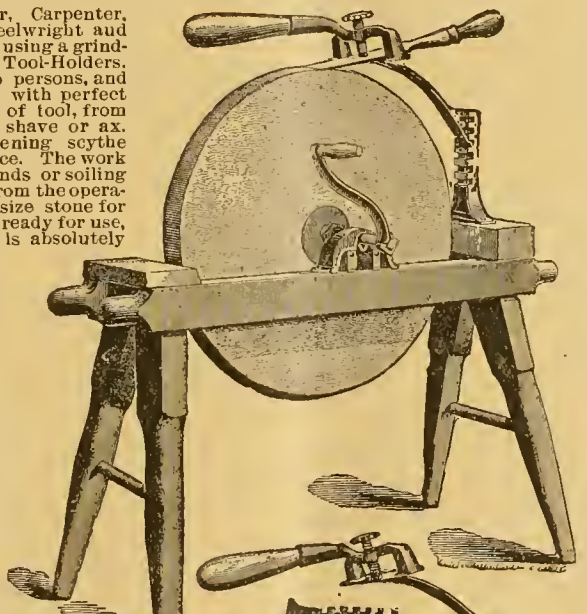

How to Use the Holder.

DIRECTIONS.—The Tool is fastened securely in the Holder by a set-screw and can be ground to any desired bevel by inserting the arm of the Holder into a higher or lower notch of the standard. While turning the crank with the right hand, the left rests on an steadies the Holder ; the Tool is moved to the right or left across the stone, or examined while grinding, as readily and in the same way as if held in the hands.

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Pinched Fingers.

Ginger! That's a pretty bad pinch, my boy. Very sorry for you, Charlie, but we'll keep on those fingers. We'll bind them up separately in linen cloths, then coat them over with shellac varnish, and let the dressing stay on until the crushed fingers are healed. But you had better keep away from those railroad cars after this! Where the flesh is not mangled, the varnish alone would do.

An Ax Cut.

That's just what happened to me, Mr. Stone. In splitting wood, the ax accidentally glanced and split my foot badly. But it was nicely dressed and healed in a few weeks. Lockjaw — stuff! Never had a twinge of it, then nor since—some 40 years. There, there, don't think of such foolishness. You'll be ready for the next piece of carelessness in a short time. Yes, witch hazel is a very good application—so is pure, unadulterated manly *grit*.

Boil Treatment.

So, Miss Daisy, you have a big boil, eh ? Well, I don't claim they are such great comforters, as some folks tell about, but they do have their usefulness in bringing effete substances in the system to the surface. If you really won't have it lanced, then you'd better poultice it so as to make it break. Perhaps the cleanest, most effective and the stickitest thing you can put on, is the skin of an egg—the side that grows next to the shell. My, how it does hang on, and draw!

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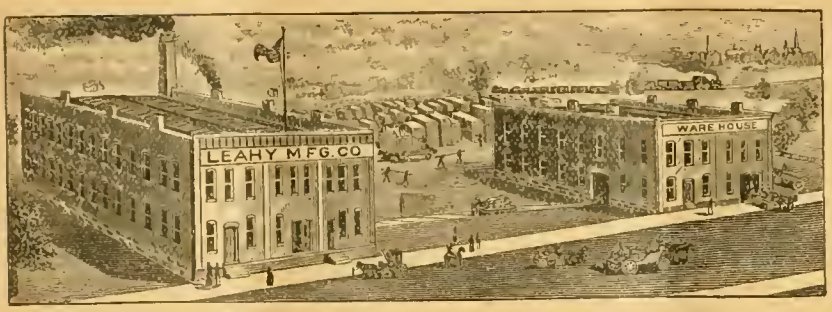

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General Items.

The Kind of Hives, Frames, Bees, Etc.

I have 76 colonies in winter quarters—72 in the cellar and 4 on the summer stands, in double-walled hives with sawdust packing on top. They are all in good condition, with plenty of winter stores.

Bees did fairly well last season, and the honey was No. 1. I am in a good locality, close to a river, with white clover on the flats and basswood growing along the banks. I have been in the business since 1885, and have been very successful.

I make my own hives, and all the supplies that I require. I use a shallow hive with loose-hanging frames, 13¾x 10½ inches outside measurement, and I would not exchange for any other that I have ever seen. The first hives that I made held 10 frames, with a super holding 10 frames also, making a 20-frame hive, and I thought that I had just *the* hive, but after using it awhile I came to the conclusion that they were too small, so I increased the size to 24 frames, and I think that I have struck it right this time. The super, when fairly filled, will hold from 50 to 55 pounds. With a strong colony of bees (such as I have in those hives), and the honey-flow good, say, don't they roll the honey in though! and they take it right upstairs, too, where it is handy to get; and in a good season they will fill the super twice, and a number of them three times. If the super is full, and not ready to extract, I raise it up and place another one underneath it, having empty combs. By that means they don't lose any time. Keep them at work if you want them to pay.

My bees are Italians and hybrids. I think I can hear some of those high-toned bee-keepers say, "He should have the five-banded or Golden Italians, to get the best results." But I don't care whether they are five-banded or three-banded, or no bands at all; if the good qualities are there, I am satisfied. If I have a colony that does not come up to the standard, I take the head off "her majesty," and place another sovereign in her domain.

I don't want to leave anybody under the impression that I am not a lover of beautiful things, because I am a lover of all that is beautiful. I like to see the bright, yellow bee, but I think that the leather-colored Italians, or hybrids, will stand our Northern climate the best; and as for honey-gatherers, I think they can compete with any other breed.

I like the American Bee Journal very much, and would not like to do without it. I think every bee-keeper should take it, as it contains a great many useful hints. WM. SHERINGTON.

Glenallan, Ont., Dec. 11.

Bee-Keeping in North Dakota.

As it seems to be the custom now to tell one's experience, we will tell ours. (I say we, because there are two of us).

Last fall we put into the cellar four colonies, and in April last took out three living and one dead—two fairly strong and one very weak. On May 19 we received five colonies from our old-time neighbor, Mr. C. Theilmann, all in fine condition. They cost $8.00 apiece, the

express charges being $3.00 on each colony. The weak colony and one of those we bought cast no swarms, but the other six cast 12; so we put into the cellar 20 colonies in good condition, though the cellar is not just what it ought to be for wintering bees.

After the honey-flow was over, the bees were fed some sugar syrup. The summer and fall were dry and warm. Not enough rain at any time after the forepart of May to wet the ground three inches deep. Everything else was favorable. The summer was warm, with no storms. The bees worked hard and gathered all they could, and gave us 425 one-pound sections of honey—ranging from amber to white. This, of course, is nothing compared with those wonderful stories of honey that some people report, but we are satisfied with the results—living, as we are, near the 49th parallel.

No honey has been taken out of the brood-chambers, although some of them were so full of honey that there was scarcely room for the bees.

The weak colony mentioned above, had, the middle of May, less than a double handful of bees. They were fed moderately up to that time, and were then somewhat strengthened by the removal of two colonies that stood by them to another place. A few of the bees (and but a few) in looking for their old homes on the old stand went in with the weak one. Well, that colony built up and became strong, and gave us 20 one-pound sections of good honey, and had plenty for winter.

We did not try to keep the bees from swarming, but let Nature take her course.

And now we want to tell you what one colony did. It cast a large swarm on May 30, and 11 days after that it cast a second swarm; then the swarm of May 30 cast a fine swarm July 14, and a second one July 25. From the one colony we got four new colonies, all put into the cellar in good condition, and 75 one-pound sections of nice honey—from the parent colony and her children. If we had killed the four young colonies in the fall, and taken the honey, there would have been not less than 125 pounds to add to the 75—making 200 pounds. Now the question is, would the parent colony have produced that much if it had not swarmed at all? You must remember that the summers here are very short. F. A. & H. P. WILLSON.

Bathgate, N. Dak., Dec. 14.

Buckbush and Golden-Rod Honey.

The bees in this part of the country did not do much the past season on account of the drouth. The weather is fine, and bees in the cellar are uneasy. I have one colony out-doors yet, and they had a nice flight this month. I wish my bees were all out on the summer stands. Only six colonies out of 29 swarmed the past summer.

I got some of the nicest amber-colored honey this fall I ever saw or tasted. We have four different kinds of the golden-rod here that the bees gather honey from. We don't get any basswood surplus—too scarce here.

Our bees gather lots of white, nice flavored honey from buckbush or ninebark, which blooms just as basswood begins to fail, and this year it lasted about 10 weeks. It seems to produce more honey in a dry season than a wet one here. I think it a fine shrub to sow for honey alone. It grows and thrives in waste places, such as openings in the timber, in pastures, on roadsides, gopher knolls, or almost anywhere where it gets a start. It blooms profusely the second season. It is a fine honey-plant for a dry climate. The seeds hang on until the leaves start in the spring. I can furnish seed if any of the bee-friends want it. Also golden-rod seed next fall, at the right time.

I have 34 colonies which I take away out on the prairie to the large, wild golden-rod fields or pastures, with asters also. EBB WATSON.

Redwood Falls, Minn., Dec. 16.

Three Poor Seasons for Bees.

I have not taken enough good honey the last three years to pay for the Bee Journal one year, but still I enjoy reading it every week, and will as long as I have a few bees.

I keep from 20 to 25 colonies, on the summer stands, well packed with outside covers. I have never lost any bees in wintering, but I fear I will lose some this winter, from starvation. I fed some of my bees sugar syrup, but I think I began too late to do any good. There are more dead bees thrown out at the hive-entrances than I ever knew this early in the fall.

There is no one in this county, that I know of, who got any surplus honey except the Hon. J. M. Hambaugh. His apiary is situated on the Illinois river bottom, where the Spanish-needle and linden is very plentiful.

G. W. WILLIAMS.

Mount Sterling, Ill., Dec. 18.

The Season of 1894 in Kentucky.

The season of 1894 will be long remembered by the farmers and bee-keepers of this part of the country. The ground was not thoroughly wet, six inches in depth, at any time between May 20 and Dec. 1. Notwithstanding these unfavorable conditions the crops seemed to adapt themselves to the conditions from the beginning, and yielded beyond all expectation, and grain is plenty and comparatively cheap. So abundant and low in price has been the wheat crop, that thousands and thousands of bushels of wheat have been fed to stock—hogs, horses and cattle. Corn and wheat have now about come together in price—40 cents per bushel.

For over two months a water famine stared our farmers squarely in the face. I saw my bees "watering" in the fashion they are usually seen in July and August, as late in the fall as the last days of November. December rains brought relief in a general way, but it will require a great deal more rain to fill up the stock reservoirs, so completely depleted by the drouth.

What about the honey crop of next year? Well, we may as well dismiss the hope or expectation of a *full* honey crop next year—we can't have it. The clover plants are not, and without the modest, little white clover, we can never have a full crop of honey here.

To-day is Dec. 24, and Christmas is here. To some of us it is the remembrance of "Peace and good-will," and joy. To some, a mere frolic.

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Contributed Articles.

On Important Apiarian Subjects.

The Production of Extracted Honey.

The second in a series of articles on the subject.

BY CHAS. DADANT.

When I heard of the Hruschka invention, in 1868, I had about 100 colonies of bees in movable-frame hives, and I, at once, ordered from a tinsmith a large round can, and bought a gearing similar to the ones used at that time on patent churns. I then requested our blacksmith to make a square iron frame, which I covered with metallic gauze all around. A revolving iron pivot in the center, and a wooden frame on the outside, finished up the extractor, in which we could extract the honey from four Quinby frames at one time. It was a very bulky machine; but it worked splendidly, and was soon busy, for it was made in June, just at the time of the honey-flow.

We began extracting as fast as the bees filled the combs, and the results were far above all that I had anticipated. I was so eager and so proud of success that I took the honey, not only from the surplus combs, but from the brood-frames as well, and filled barrel after barrel, like A. I. Root, who thought of emptying his cistern to store his crop. But a little of my enthusiasm dampened when I found that we had extracted our honey before it was ripe, and that a part of it ripened unevenly. We found that, in some cases, a part of the water separated from the honey at the time of granulation, and remained liquid, though somewhat sweet at the top of the honey. This had to be drawn off for spring feed and for vinegar.

RIPENING AND UNCAPPING THE HONEY.

Then the following question came to my mind: How can we ripen honey—by evaporating it after harvesting it, or by waiting until the bees have ripened it in the hive? The second way was the best, without a doubt. But if we wait until it is ripened in the hive, we will have to uncap the combs, since bees usually seal it as soon as it is ripe.

I had uncapped several combs, but had found it a difficult and unpleasant job, especially as I first used a common table-knife. The knife, being straight, would rub against the edge of the frame, the more so as the combs were not always built straight in the frames, comb foundation not having been yet made and used practically. Besides, the cappings stuck to the knife or to the combs.

I was not alone to notice these difficulties, for several methods of uncapping were invented. One bee-keeper tried a "card," to scratch the combs, like the cards used to card wool; another invented a revolving scraper. These inventions were discarded as soon as tried, and the thin-blade curved-handle knife succeeded better, notwithstanding the inconvenience of the capping sticking back to the combs; a defect which was later avoided by the invention of a knife with a wide thick blade and beveled edges (invented by T. F. Bingham), and which, so far, has not been surpassed.

Wm. McEvoy and Family. Woodburn, Ont.—See page 39.

DIFFICULTIES IN DISPOSING OF EXTRACTED HONEY.

So we had a good crop of extracted honey on hand, but a difficulty arose. How were we to dispose of it? So far, the only honey offered for sale, in the United States, was comb honey, whole or broken, and the ugly, dark and dirty article

known as "strained honey," made by pressing the combs with more or less pollen, dead bees, and rotten wood from bee-gums mixed in.

We offered our honey to grocers. They refused it. We offered it to the druggists, who had never seen anything but the dark strained honey, and who could not believe that it was a pure article. They told us they had no use for sugar syrup! So we had but a few customers mainly among our foreign-born neighbors, who had seen and used liquid or granulated honey in Europe, extracted by sun heat.

Part of our honey was sent to a St. Louis commission merchant. Luckily honey was scarce, and although of slow sale the honey brought a good price. It was only after years of efforts, and by placing the honey in the hands of local grocers, on commission, that we could succeed in establishing a reputation for it. It took some 15 or 16 years before the people would even use the term "extracted honey," and it is but a comparatively short time since the large city markets quote "extracted honey" at all; many people still mistaking it for the old "strained honey."

COMPETING WITH ADULTERATORS OF HONEY.

When extracted honey began to be more popular, the sales improved, but we soon had the competition of adulterators, which compelled a lowering of prices. One day as I was offering honey to a grocer—this was in 1877—he replied that he could buy it in Chicago for much less than the price asked (20 cents), and produced a small jar containing one pound, for which he was paying 14 cents. Imagine my astonishment when I read upon the label the name of a Chicago dealer, to whom we had sold several barrels the same season at 17 cents per pound. How could he bottle it and retail it at 14 cents? But evidently it was not the same article, for his honey did not granulate. We also had the competition of a New York firm who used to put up a small piece of comb honey in a pound jar with liquid honey around it. The comb honey was put in "to prove its genuineness." It took a long time to show our customers that, if they wanted pure honey, they should ask for the granulated honey, since nearly all pure honey granulates in this climate, during cold weather.

At a bee-keepers' convention held at Burlington, Iowa, in 1878, I exhibited a jar of glucosed honey bearing the name of a New York firm, and a committee was then appointed to present a petition to Congress to obtain a general law preventing the adulteration of sweets. This petition was signed by some 30,000 people, and was heartily endorsed by Mr. Newman, in the American Bee Journal. The petition, however, was buried by some committee in Congress, which, in spite of my endeavors (for I had been put in charge of it) never reported.

Whether this proposed law interfered with some lawyers' idea of constitutional rights, whether it was neglected by some lazy Congressman, or whether it interfered with some wealthy gentleman's interests, I have never known.

Hamilton, Ill.

(To be continued.)

Cover for Sections to Prevent Propolizing.

BY GEO. O. SCOTT.

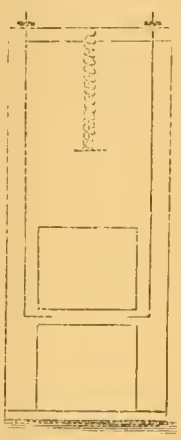
A nameless questioner, in a recent number of the American Bee Journal, asks Dr. Miller, "What is used to cover the sections, so they will not get covered with propolis? I use section-holders." As a constant reader of the American Bee Journal, I have been patiently watching for some one to ask such a question, as it suggests an unfortunate feature of the section-holder. I am in full sympathy with this questioner, as he has evidently experienced the same trouble as myself, viz.: propolizing the unprotected top of the sections. The Doctor's answer, though disappointing, is unique and amusing. His ¼ inch "layer of air" as a cover for the sections, while it possesses the essential quality of cheapness, is too ethereal, and does not seem to convey a satisfactory answer in his usually practical way.

My unvarying experience has been, that a bare-headed section unprotected, save by a "layer of air," will at any season of the working year, be more or less soiled. The tops of the sections being the first seen after packing in the shipping-cases, an air of untidiness is given the otherwise faultless sections. So convinced by experience have I become, of the propolizing instinct of the bee to plaster an uncovered section top, that for some time I have not permitted an unprotected section on the hive.

For the benefit of the Doctor's questioner, and others who may have had a similar trial, permit me to give a successful remedy. Simply tack a section-holder bottom or "pattern slat," on top of the holder. The sections are thus snugly covered on all sides. But you say, "This pattern slat nearly fills the bee-space." That is true. To overcome this, place a frame of ¼x⅞ strips between the surplus case and the lid. The section tops will thus remain clean, the "layer of air" be provided for, and no bees are crushed when the cover is replaced. So rigged, an annoying feature is overcome, and a handy arrangement is the result. But this is fussy! The cost, time and trouble is as nothing compared to the annoyance of scraping 24 plastered section tops, that later will be packed with irremovable stains.

Will some one else tell us what to do, as the Doctor's "layer of air" has been found wanting. Shall we continue to allow the bees to soil the section tops, or will we break up the too shallow surplus cases into kindling wood, and order a new lot of slightly increased depth, at an advanced price? No, not yet awhile! The pattern slats to cover the tops, and the strips to raise the cover, will suffice us until we have more light. We can probably avoid all these changes, if the Doctor will but tell us how he manages to "allow nothing to touch the sections." His questioner's bees and mine "touch" up the top of our exposed sections until they "get covered with propolis."

For long years the writer has used exclusively that grand old stand-by—Root's Simplicity hive—with its super of seven wide frames of eight sections each. Being a light weight, and not always in fighting trim, I partly increased my apiary with the dovetail. Save in the case of handling the newer and lighter hives and cases, to-day I must confess to a friendly weakness and a kindly regard for the old-fashioned Simplicity.



End View.

FOR REMOVING CASES OF SURPLUS HONEY

In handling the heavy surplus arrangements full of finished honey on the Simplicity hives, I use a "bench screw elevator." It has four ⅜-inch rods bent in at the bottom ends, and hung to the four corners of a frame. This simple and cheap contrivance has been a source of comfort, and a saving of much heavy lifting. The ease with which it can be manipulated, and the surprise it causes the bees at seeing their season's surplus soar heavenward, without apparent cause, would bring a grin on a solemn face. So gently is a full case raised that scarcely a bee ever leaves the combs to interview the delighted operator. Non-patented. Wadena, Iowa.

Cause and Treatment of Bee-Paralysis.

BY ADRIAN GETAZ.

Before beginning our next campaign in bee-keeping, let us take a good, full look at our enemy, the now famous bee-paralysis.

As to a description of the disease, I shall refer to my two contributions on the subject in the American Bee Journal, in 1894, and also to an excellent article written by a correspondent who signed himself "Novice." Also to the description given by Cheshire, in his books, and if Gleanings and the Review are at hand, the articles they have published on the subject, especially those written by Messrs. Ford and Dayton.

That the disease is produced by a bacillus, as described by Cheshire, is now almost incontestible, and can be safely admitted. That it is exceedingly contagious is also certain, but how it is transmitted from one bee to another is the first point to investigate.

In foul brood, the bacillus multiplies exceedingly rapidly, and when the brood is dead, and the nutriment thereby exhausted, turn into spores by the millions. These spores escape, and are carried all over the hives by the bees themselves, as the spores may stick to their bodies by the honey whenever any spores happen to be deposited on it, and perhaps also by the wind, as the spores are so light that they float freely in the air, until they come in contact with something or other to which they adhere.

Among the human diseases, none is communicated directly by contact. In case of consumption, some of the bacilli produced in the diseased lungs are thrown out by coughing with the matters expectorated, transform into spores, and escape, and are carried by the air into somebody

else's lungs, where they develop. With the fevers, the bacilli are found also in the dejections of the patient, where they develop into spores as these dejections dry, and from there either float into the air, or are carried by the water, and eventually find their way into somebody else's digestive apparatus, where they multiply and develop again another case of fever.

The bacillus producing the silkworm disease has already been referred to in my former contributions. In that case the diseased worms or larvæ do not always die, but frequently go through the full transformation into moths, and these moths lay eggs, but these eggs are found to be also infected, and give birth to diseased worms.

Taking all into consideration, we see now that the bee-paralysis spores must be transferred from the diseased to the healthy bees. The bacilli develop in the body of the diseased bees chiefly in the blood, as Cheshire claims, from thence they escape (after being transformed into spores), when the bees die, or rather from their dead bodies, probably by the millions. From there they float in the air until they stick to some honey or something, and are swallowed by some other bees that become diseased in their turn. It is possible, however, that the dejections of the diseased bees also contain bacilli and spores, and are also a source of contamination. It is also possible, and even probable, that some of the spores find their way into the healthy bees' bodies through the respiratory organs.

Another source of contamination is possibly the honey itself. While the disease resides chiefly in the blood, yet bacilli are also found in the other parts of the body, and when the disease is far advanced, the whole body is full of bacilli, even the ovaries of the diseased queens. When we consider that the bees are constantly swallowing and disgorging honey, handling it one to another, transferring it from one cell to another all the time, we readily see that whenever bacilli are in the digestive apparatus of the diseased bees, they will shortly be transferred to some other bees, or to the larvæ that they are feeding.

A third and last source of contamination is, as pointed above, through the eggs of the queen.

Summing up, we have to destroy the spores or bacilli under three conditions, viz:

1st. The spores floating in the air or sticking to the combs or the walls of the hives, etc.

2nd. The spores or bacilli contained in the living but diseased bees, as these may be transferred to other bees through the honey, and more than that, these bees' dejections, or their dead bodies, are also a source of contagion. In a word, we must also treat the bees themselves.

3rd. Replacing the diseased queens by healthy ones.

We will now go over the possible remedies, as follows:

1st. As to the spores floating in the air, etc. Sulphur has been tried. There is no doubt that sulphur will destroy every spore that it touches, but it is readily seen that one or two spoonfuls of sulphur dusted in a hive cannot possibly reach the spores anywhere and everywhere in the hive, especially those floating in the air. Spraying with some antiseptic would be much better, but still objectionable. Fumigating with salicylic acid (see Cheshire and Langstroth Revised), I think would be much surer, as the fumes would certainly reach everywhere. There is further this much more in favor of fumigating, that is, it may also cure the diseased bees. The bacilli are chiefly found in the blood, and the fumes of the burnt acid come really closer to the blood through the respiratory organs than the remedies administered through the digestive apparatus can possibly do. In fact, all those who have tried the fumigating process on foul brood, say that it is more effectual than feeding and spraying. Some substitutes have been reported successful (I am referring to foul brood); one is simply to put some pieces of camphor in the hive, and trust to the evaporated camphor to do the fumigating. Another German apiarist advises the use of carbolic acid mixed with some wood-tar (I suppose he means creosote), and spread the same on a piece of felt, put the felt under the combs, covering it with something that would prevent the bees from sticking to it, and yet not prevent its evaporation.

2nd. Treating the diseased bees. That is, feeding with medicated food. Many drugs have been tried on foul brood. Salicylic acid, carbolic acid, oil of eucalyptus, lysol, camphorated alcohol, formic acid, etc. The majority of them have the disadvantage of a very bad taste, and are difficult to administer for that reason. Some cost too much. Salicylic acid would probably be preferable to others. I would have it dissolved in alcohol rather than mixed with borax. The mixing with borax transforms the acid into salicylic of soda, which is far less effectual than the acid—at least it has been found so when applied to human diseases. Formic acid has been reported very effectual, and has the advantage of not being objectionable to the bees, but it costs too much. I, somehow, doubt its efficacy. Formic acid is contained in bees and their honey, and if it was such a good cure, bees never would be sick. I do not know whether anybody has tried quinine, but it is certainly worth trying.

Remember, that the above remedies were tried on foul brood, but as foul brood and bee-paralysis are produced by bacilli very similar, it is probable that whatever drugs will kill one kind, will also kill the other.

3rd. Removing the queens. The difficulty is the cost, and, besides, there would be a question where to get queens that might be insured to be absolutely sound. Worse than that, a healthy queen introduced into a diseased colony would soon become diseased, and be no better than one reared by the colony itself. On the other hand, it is not probable that a queen lays infected eggs until she is herself in a far advanced stage of the disease, so by re-queening frequently—say twice, or perhaps three times during the year—the contamination from the queens would eventually be eliminated, that is, provided the other sources of disease should also be destroyed during that time.

As to salt, coffee, etc., I have to say that they are of no value in treating human diseases, and probable no more effective on bee-diseases.

Destroying the whole outfit is out of the question. Where could we get bees to replace ours that could be insured as sound, and how long would they stay sound, if the disease is established in the neighborhood?

The starvation process seems to me also out of the question. After four days or more of starvation, the diseased bees or queens would certainly not be in better health than at the start. Knoxville, Tenn., Dec. 18.

Blacks and Italians—"Civilized" Bees.

BY ROBT. PESTELL.

It was with much interest I read Mrs. Jennie Atchley's lesson, No. 12, in the American Bee Journal of Oct. 25, 1894, on the different races of bees and their habits. Mrs. Atchley says:

"We have a wild and a tame variety of a great many animals that very much resemble each other, and the black bees seem to want to pull right out to the woods as soon as possible after a swarm. Also, when their hives are opened they run as if they were scared almost to death. All these characteristics seem to prove to me that they are a wild variety of bees."

Writing of Italians she says: "The Italians are evidently our tame bees, and have been worked and manipulated by the hand of man more or less since the world was created..... The Italians are harder to get off their combs at extracting time, or any other time. Being tame and gentle, they hold fast."

My present practical experience in apiculture does not admit of my using the term "civilized bees" as distinguishing them from barbarians. It may be that the Italian bees have been kept longer as domestic appendages than the blacks. Admitting them to have been so, it does not follow as a sequence that such a condition has in any way tended to soften their native manners. The less bees are manipulated, particularly in the brood-chamber, the less truculent they become—most bee-keepers admit.

Should, however, Mrs. Atchley's theory be a correct one, it may be that the ages of civilization to which they have been subjected to, have evolutionized them hands with which they so tenaciously cling to the combs. The barbaric or black bees evidently have not been subjected to this process of evolution in the way of hands—they retain great vigor of leg. They certainly "use legs and have legs" (Locke). Locke drew up a code of laws for North Carolina, didn't he? He might have influenced the bees. It may be there are some persons interested in the sale of Italian queens who persistently exaggerate the merits of the Italians and unduly depreciate the blacks. I believe it is the desire of the American Bee Journal to diffuse light equally upon all races.

With every regard for Mrs. Atchley's opinion, and particularly for the unselfish and energetic manner in which she has given her extensive experience upon matters apiarian, I have a theory upon the subject, and it is this:

There does not exist a race of bees which can have claimed for it a civilization beyond other races, other than that of having perhaps been kept for a longer period as domestic belongings. The attention and manipulation they might receive from man would not tend to reduce their truculent qualities. It is generally admitted, I believe, that the honey-

bee was not found a native of the American continent, but was introduced by the early settlers. The black race of bees is supposed to have been the first introduced, and that it was not until comparatively recent years that the Italians made an appearance—a supposition I am somewhat inclined to doubt, from noticing bees kept by mountaineers in southwest Virginia, which I would think are not of the black or German race. Some of these mountaineers claim French ancestry.

The blacks belong to more northern Europe—the Italians to southern; the former being the hardiest race, Nature's provision fitting them to survive amidst surroundings which would be fatal to the Italians if left solely to Nature's care.

It is, I believe, generally conceded by scientists that a greater amount of energy is necessary to produce dark color than bright ones. The climate of America widely differs, by reason of latitude, sea influences, topographical and other causes. In locations where the climate and flora most resemble the climate and flora of the continent where Nature produced the black bee—there is this bee best adapted to succeed. The same applies to the Italians. *Suum cuique*—"let each have its own."

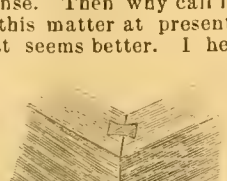
Biltmore, N. C.

Hive-Making and Other Matters.

BY W. K. MORRISON.

Some recent articles in the American Bee Journal arrested my attention, particularly those bearing on hive-making and honey-producing flora—important matters, surely, all will say.

To begin, I have many objections to the "dovetailed" hive, one of these being its name, for it is not a dovetailed arrangement in any sense. Then why call it such? I will not, however, enter into this matter at present, contenting myself with presenting what seems better. I herewith show a true



dovetail that would make a very much stronger box than usual, and more, would last longer, too—something to be greatly desired by all the fraternity of bee-masters.

Lately I tried a plan of running the frame shoulder clear through to the outside, so that the frames may be caught without putting one's fingers inside the hive. The great trouble has been that swelling and shrinking of the frame ends caused trouble. Even the genial Dr. Miller might try my method. I take a hickory division-board, and on it perpendicularly a half-inch thick strip is nailed, then this is nailed on the hive side, fastening it through the strip only. This makes a half-inch space between the side and division-board. Being nailed only at the center the board is free to take up the extreme expansion of a dozen closed-end frames. In fact, the board is only a spring. This plan necessitates a bee-space in the roof, but this will also be found an advantage, as the bees do not stick it fast, as is usual with other roofs.

On the bottom-board I shall use a strip of wood with notches in it for an entrance, so the hive may be inverted without the danger of the frames falling. If some of the hive-factories would adopt the suggestion of Mr. F. L. Thompson—increasing the frame depth to 11¾ inches—they would undoubtedly gain business thereby.

SOMETHING ABOUT HONEY-YIELDERS.

My impression is that the question of floriculture for honey-production is far from settled. I suspect few bee-keepers know the possibilities of alfalfa as a forage plant for live stock and bees. It could be made to largely supplant the corn-plant in many sections. One need not plant much of it—enough to demonstrate its useful qualities would be sufficient. It is very likely we could get some good forage plants from Europe, if we tried. Spanish-broom might prove a desirable acquisition for us, seeing it is so valuable to trans-Atlantic bee-men. It would probably be self-sowing, and if so we want it. A good stand of heather, too, would be helpful to us who have no fall crop at present. Mr. Benton might tell of his experience with the broom. The French also grow some plants for scent-making and other purposes, which could be grown in connection with our industry. We might raise a subscription and send our Prof. Cook over the ocean to see about such things for us. He would earn his pay, we all know. Perhaps he has earned it already.

The Russians cultivate sunflowers extensively, and why not we? The cotton-seed factories are crying for more material all the while, and very likely would take all the sunflower seed procurable. Poland and Portugal are each famous as honey-producing countries, and I have never seen a proper explanation of their success.

The present agitation for good roads will in after years be beneficial to us, for the highways will be shaded by linden and similar trees if we but ask it. Not long since The Eagle, of this city, had a series of letters from eminent authorities on trees, and the linden was awarded first place by most of them—the Russian kind being considered the better. If our efforts succeed in inducing the American farmer to abandon his immense fields of corn for something more profitable and less laborious, we have not labored in vain.

Brooklyn, N. Y.

Report of the Illinois State Convention.

BY JAS. A. STONE.

[Continued from page 21, last week.]

Mr. Becker—My bees have worked a good deal at the cider-mill, and I would like to know whether it would be well to winter them in the cellar or not?

The general opinion was that bees did not store anything when working at cider-mills.

Mr. Robbins moved that the code of rules for judging honey at Fairs (on page 80 of Second Annual Report) be made a special order for 10 a.m. the next day. Mr. Becker moved as a substitute (which carried) that the question be taken up now. A motion was made to amend the code of rules, but it was lost.

The convention then adjourned to 9 a.m. the following day.

THE SECOND DAY'S SESSION.

The convention was called to order by Vice-Pres. J. Q. Smith, and the order taken up where it was left off the previous day.

Mr. Black moved that the code of rules for judging honey at Fairs (page 80 of the Second Annual Report) be adopted. Carried.

Sec. Stone moved that the chairman appoint a standing committee of three to have charge of all matters relating to the State Fair and State Board of Agriculture. Carried. Messrs. Stone, Finch and Robbins were appointed.

Mr. Robbins moved that the Executive Committee of this Association (which is composed of the President, Treasurer and Secretary) be the legislative committee. Carried.

It was moved that the committee on State Fair matters have charge of the correspondence with the University authorities regarding an experimental station for bee-keepers. Carried.

Mr. Jas. Poindexter then read the following essay, on

Swarming and Prevention of Increase.

There can be but little question in many localities as to the utility of keeping all the working force of bees in one hive together during the main honey-flows, when it can be done without interrupting too much the work of the bees, and the manipulation of frames and hives not too great to be profitable. Through the methods I have practiced for the prevention of increase, I have found not only a larger yield of honey, but that such colonies were usually in better condition for winter, and required less attention during the balance of the year. My first work before the swarming season begins, is to see that all queens have one wing clipped. Then operate in view of two things, viz.: First, that different strains of bees vary in amount of swarming. Second, that while there is plenty of empty cells inside the brood-nest, but very little swarming will occur. Those colonies which gather the most honey and show the least disposition to swarm, are selected to rear queens from to replace those in hives where the bees are less inclined to stay at home and attend strictly to business.

In producing extracted honey, swarming is kept in check by putting empty combs in the brood-chamber, or like that in working for comb honey, by giving plenty of surplus room, which keeps the brood-chamber from being crowded.

If some colonies still persist and swarm after these accommodations, the queen is caged, and placed under the alighting-board, when the swarm soon returns, and at the end of seven days she is released in the hive. Usually this stops

any further swarming during the season by colonies thus treated. JAS. POINDEXTER.

On motion it was decided that the Secretary be instructed to send out return postal cards during the honey season next year, to the members of the Association—the same as this year—for their report of the honey crop, to be published in the bee-papers.

On motion the Secretary was allowed $25 for his services for the past year.

The election of officers resulted as follows: President—J. Q. Smith, of Lincoln. Vice-Presidents—S. N. Black, of Clayton, 1st; George W. York, of Chicago, 2nd; Mrs. L. Harrison, Peoria, 3rd; W. J. Finch, Jr., of Springfield, 4th; and Jas. Poindexter, of Bloomington, 5th. Secretary—Jas. A. Stone, of Bradfordton. Treasurer—Dr. C. C. Miller, of Marengo.

Mr. Black moved that a committee of seven be added to to the Executive Committee to assist them in securing legislative enactments. Carried. The following were named: Thos. G. Newman, Chicago; E. T. Flanagan, Belleville; George F. Robbins, Mechanicsburg; A. N. Draper, Upper Alton; C. P. Dadant, Hamilton; J. A. Green, Ottawa; and P. E. Vandenburg, Jerseyville.

The committee appointed to confer with the State Board of Agriculture, reported as follows:

The committee appointed to confer with the State Board of Agriculture, concerning the premiums to be given on bees, honey and apiarian devices; and also to confer with the State Board of Commissioners of Illinois University, at Champaign, beg leave to report that they presented the premium list adopted by our Association as published on page 41 of the First Annual Report, with the recommendation that the list be adopted as given. The State Board of Agriculture referred the matter to the superintendent (Hon. D. W. Vittum) of the department in which bees, honey, etc., are classed.

Mr. Vittum met the committee and told them he did not have a sufficiently large appropriation for premiums to allow us the amount asked, but would give us a raise over the previous year, and thought he could allow a list having a total of about $100. Whereupon your committee revised as they thought best, reducing the total amount to $109, which was accepted.

Mr. Vittum requested the committee to recommend a list of suitable judges to award the premiums, from which he could make a selection. The committee, by ballot, selected and sent Mr. Vittum a list of five judges from which the services of Mr. A. N. Draper, of Upper Alton, were secured.

The committee desiring to advance the interests of the State Fair, and of our association, called the attention of the State Board of Agriculture to the show-cases used in the Illinois exhibit at the World's Fair, and in charge of our President and Secretary, with the suggestion that they use such means as they thought best to secure the same for exhibition purposes at the State Fair. Whereupon your Secretary, upon conferring with the Secretary of the State Board, turned over the cases to the said Board, taking the Secretary of the State Board's release, and they now hold the cases as custodians, subject to the order of the State. Along with the four cases turned over were nine mirrors.

Your committee further, in correspondence with Prof. Morrow, of the University of Illinois, in regard to an experiment station for bee-keepers, gave us great hopes that something would be done for us, but it took time to develop such such things. And in consultation with members of the State Board of Agriculture, Mr. Chester, of Champaign, being also a member of the Board of Commissioners, assured us that he had made them an offer of the bees to conduct the experiments; but as his bees were now all dead, they would have to look elsewhere for material with which to carry on the work.

JAS. A. STONE,
W. J. FINCH, Jr., } *Com.*
GEO. F. ROBBINS,

The convention then adjourned, *sine die*.

JAS. A. STONE, *Sec.*

Grafting-Wax.—Mr. Jas. A. Minnich, of North Anderson, Ind., has kindly sent us the following recipe for grafting-wax:

Equal parts of beeswax, rosin and tallow, melted and stirred together makes a splendid grafting wax. It is excellent for covering wounds made in trimming trees, etc.; and is also a splendid salve for boils, sores, cracked and chapped hands.

By reducing the tallow to one-fourth the above amount, muslin or calico dipped in while warm, and allowed to become cold, then torn in strips half-inch wide, makes excellent wrapping for grafts and budding, etc.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Why Bee-Men Don't Bow to Shallow Frames.

I want especially to ascertain a decision for either a dovetail or Tinker hive. Why won't old bee-keepers bow to shallow hives? Is it because they have to then re-stock their apiaries, and be bound to the shallow-frame supply dealer and all the accessories? or is it the merit of the old hives that makes them stick to them, letting good enough alone?

Carthage, Ohio. J. M.

ANSWER.—The expense of making a change is enough of itself to prevent any sudden change without strong reasons, and if I am not mistaken some of the strongest advocates of shallow frames who have been using them for years still have part of their bees in deeper frames. In the majority of cases, however, bee-keepers seem to prefer the deeper frames, some without having tried them, and some after using them. In my own case, I have a number of shallow frames, and at one time I thought better of them than I do now. I shall probably use them because I have them, but I doubt if I will ever get any more.

What Honey-Plant to Sow.

I have an unused ground-space that becomes inundated every winter, but it stays dry (half a foot above water-stand) from April to October. Will you kindly tell me what honey-plant I could sow upon this spot? BELGIUM.

ANSWER.—In this matter I would rather have advice from nearer home, for what might do well in Illinois might be an utter failure in Belgium. Make out a list of the common plants that you know of in your locality that yield honey, then take it to a practical farmer near by, and ask him which of them will flourish and bloom on the land of which you speak. Possibly a good plant might be crimson clover, *trifolium incarnatum*; also buckwheat.

Something About the "Long-Idea" Hive.

I see mention occasionally of a "long-idea" hive. Kindly tell what the dimensions of the hive is, or was; what the promoters were aiming at, how they operated it, and what the result was. FARMER FITCH.

ANSWER.—The principal "idea" in a long-idea hive is to have a large number of frames on a level—that is, a hive long enough to get in a goodly number of frames—15, 20 or more all in one story. Do you get the "idea?" A good many years ago quite a little was said about them, but I think not many are used in this country at the present time. The thought was that bees would commence work more readily on an adjoining comb than they would on a comb in a different story, so the hive was made large enough to have all combs adjoining. The plan of operation, you will readily see, would not specially differ from any other, the combs not occupied with brood being taken out for extracting.

Full Pound Sections—Open and Closed Sections—Sectional Brood-Chamber.

1. Does a 4¼x4¼x1⅞ inch section hold a pound of honey if filled or stored between separators?

2. Has a section with two sides closed any other advantage than to keep a wood separator from warping?

3. Will bees enter a super filled with 4-side-opening sections quicker than one filled with 2-side-opening ones?

4. Who invented the first sectional brood-chamber, and made it public? A. B.

ANSWERS.—1. A fixed size of section does not contain a fixed amount of honey. A section of the size you mention, if no separators are used, will vary when filled with honey so that the heaviest sections will weigh half a pound more than the lightest. With separators, the difference will not be so

great, but it will be considerable. Neither will the average weight be the same one year as the next. In a good year, the weight will average more than in a poor year. Generally you will find that your sections will average a little less than a pound. The idea that you can have sections filled so that each section will weigh just a pound, may as well be given up. I'm rather in favor of having sections a good deal less than a pound, so that customers will never suppose they are getting a full pound of honey in a section.

2. There's less danger of marring sections when packing with closed sides.

3. I don't suppose they will.

4. That I don't know. The Heddon hive was patented, and came prominently before the public a few years ago, but B. Taylor claims to have been using the same sectional chambers for many years. If you take all the forms of hives that have been used by means of sectional brood-chambers added above or below, I suppose they will go so far back that it will be difficult to find who first made them public, for the word *ekc* or *nadir* was in common use in England many years ago.

Queen Taking Wing—Probably Worms—Leather-Colored Bees.

1. When opening a hive, and the queen takes wing, does she ever come back again?

2. What caused so many of my young bees to come out of the hives last spring with undeveloped wings? Was it because they had felt the cold snap?

3. Last summer I had some dead brood in the combs, and opening a cell I found some small worms ⅜-inch long, and as thick as a common safety-pin. What kind was it?

4. How was it that all my young queens reared from pure mothers (Italians) came out leather-colored? The workers have the three yellow bands. N. N. A.

Perth Amboy, N. J.

Answers.—1. Yes, but they haven't always done so for me.

2. More likely worms were in the combs. They gnaw their way among the cells, and the young bees come forth imperfect, sometimes having hard work to get out at all. It is barely possible that such a thing might occur from insufficient feeding of the larvæ, as some say larvæ will be scantily fed when bees are not gathering, and have no *unsealed* honey in the hive.

3. If they had webs in the combs, they were the common wax-worm, not yet of full size. If the dead brood had been there for some time, they may have been a kind of carrion worm that would do good rather than harm.

4. If the workers have the three yellow bands, no matter about the looks of the queens. Some of the imported Italian queens are quite dark, and a large number prefer leather-colored queens. Queens are not banded like workers, anyhow.

Uneasy Bees—Moving and Placing Hives.

1. I had a colony to swarm, and in two or three mornings the workers from the old stand, or some 40 or 50 of them, came out and flew all around in front and behind the stand, and all under the shelter they were put under, and would alight on the ground in front. They acted as if there was something lost, and they were interested to have it. This went on for three mornings. One would have thought them robbers, but not so. What was wrong?

2. I want to move my bees about ¼ mile. What will be best to move them on? I have 14 colonies now, and I am so afraid to disturb them for fear of losing a colony. When will it be safe to move them? They are under a shelter, and will be moved to another shelter.

3. How close could they stand and be safe, and the bees and queens not get into the wrong hives? M. W. G.

Bankston, Ala.

Answers.—1. It looks as if they were hunting their queen.

2. In the North I would wait till sleighing in January, or later, then haul them on runners. In the South it may be well to wait till well along in the winter—January or later—for the longer they are quiet in their hives, the less likely to go back to the old place. They can be fastened in the hives, with wire-cloth at the entrance so as not to smother them, then hauled on a wagon, set in their new place, and have a board or something of the kind set up before each hive, so the bees will bump their noses when they come out, and notice where they are. It will be well if the old place be changed as much as possible, so that if any bees should go back it will not look like home to them.

3. How close together they can stand depends a good deal upon surroundings. If there are trees, posts, or something of the kind right in front of the hives, or for that matter close to them in any direction, providing such landmarks are not more than five or ten feet apart, there is little danger of getting them too close. If, however, there are no such landmarks, then it is better to have them six or eight feet apart.

But if room is rather scarce, here's a way that you can get in four times as many on the same piece of ground without danger of having the bees mix: Put your hives in clusters of four, a pair of two as close as they will stand side by side, then a similar pair placed back to back to the first pair. Then put another group of four with a passage of about three feet between the groups, and your bees will not mix any more than if you put a single hive in place of each group.

A Peculiar Case for Consideration.

I had 10 colonies of bees last spring in good condition, and one of them later on proved not to be good in the outcome. It cast two fine swarms in April, and the parent colony and two young colonies worked splendidly. One day I thought I would extract some honey from these colonies, and on entering the first, I found that all the honey they had was nothing but what I called "foam," and they had a lot of it. Its taste was sour, and there wasn't much honey taste to it. On examining the two young colonies, I found them the same. I could not account for it when all of the rest of my colonies had good and pure honey—all but these three. Now all three of the colonies are dead, leaving lots of that stuff in the hive. I would be pleased to know what was the matter with my bees. J. M. J.

Pike, Tex.

Answer.—This seems a very interesting case, and I confess it is something I cannot explain. Perhaps some of our Southern or Texas friends can help us out. It would look as though the bees had been getting honey from some bad source, but if so, why should the trouble be confined to these three colonies? Still, there is nothing remarkable about that, for I've had one or two colonies storing light honey when the rest were storing dark. If the supposition is correct that the source of the honey is at the root of the difficulty, then it looks as if there was some kind of an understanding between the two swarms and the mother colony. There may be more of this than is commonly supposed, that is, bees going back and forth from the new hive to the old.

The Bee-Escape to Stop Robbing.

In this neck of woods (Marion county, Kans.,) we have had a very bad drouth, and an almost entire failure of crops, but we will all pull through, including the bees. I got about 50 pounds of honey per colony, spring count, and increased from 13 to 22 colonies. I had robber-bees start during the dry fall. I closed up the hive they were robbing, except enough to slip a Porter bee-escape into the opening, and the bees became quiet in less than two hours, and staid so. I want to ask if the kink is likely to succeed again, or was it just a pure scratch? D. J. F.

Answer.—No, it wasn't an entire scratch, and the plan deserves more thorough trial than it has had. I have often thought that the coarse wire-cloth with three meshes to the inch, that I sometimes have at the entrance in spring or fall, was a great hindrance to robbers. They don't seem to like to go where there isn't clear sailing for their departure in case they felt suddenly called upon to attend to business elsewhere. It's on the same principle that hay or straw at the entrance is a hindrance to robbers. I should expect queen-excluding zinc to work better than the coarse wire-cloth.

Honey from the Poplar Tree.

When you are speaking in America of poplar honey, is it a harvest that is produced by the tree—*Populus pyramidalis?*

Belgium.

Answer.—A number of kinds of poplars are in this country. The kind that yields such abundant harvests of honey is *liriodendron tulipifera.* In the Northern States it is called tulip tree or whitewood. So it is not a true poplar or *populus* at all.

Scientific Names of Familiar Honey-Plants.

Please give the scientific names of catnip, (Is it the same as catmint?) horehound, milkweed and catclaw. All these names I have met in the American Bee Journal, but not (at least not explained) in my dictionary. BELGIUM.

ANSWER.—Catnip and catmint are the same—*nepeta cataria.* Horehound—*eupatorium rotundifolium.* Horsemint—*monarda punciata.* Mesquite I don't know. I believe it's a tree that grows in the Southern States. Heart's-ease or smartweed—*persicaria mite.* Milkweed—*asclepias cornuti.* Sourwood—*oxydendrum arboreum.* Catclaw is one of the Southern plants I don't know.

The Sunny Southland.

CONDUCTED BY

MRS. JENNIE ATCHLEY, BEEVILLE, TEX.

Some Evidence in Favor of Single-Walled Hives.

MRS. ATCHLEY:—The fact that you are a bee-keeper*ess* and a public woman (at least so far as the American Bee Journal is concerned) emboldens me to "drop you a line," as "Jack" said to the mermaid.

On page 813 of the Dec. 27th number you say you think of trying double-walled hives, as a protection against heat. Now I have given the matter a pretty good test, ever since Mr. Root first advertised double-walls, and my experience is that a board shade is equally as good as a double wall, far cheaper, and must less strength laid out in lifting, so I say to you, "*don't.*"

I am in Eastern Massachusetts. The temperature runs from 15° Fahr. below zero (it is 2° Fahr. to-day) in winter to 115° Fahr. in the summer. These are the extremes, but it is common in the winter to have "spells" of a week at a time when the mercury stands within 10° above zero to 1° or 2° below, and in the summer from 95 to 105, or 115° even in the sun. I have found no trouble with heat; combs never melt down, with myself, and won't with anyone, I think, if a little care is taken. I gave ample ventilation both winter and summer. By *ventilation* I don't mean, as some do, a stream of air through, but ventilation in its proper way as regards effects. I look out of my chamber window every day and see two single-walled "Root Simplicity hives" that are just roaring with bees, and no protection save the back of a "lean-to" shed, on the north side, with a half story "storage chamber" over tops filled with forest leaves and entrance whole width of hive; those same two hives having occupied the same position with no other winter protection for the last 4 years. This is a *piece* of evidence only. It *proves* nothing taken by itself, but combined with the fact that my bees are all in good condition, the single walls just as good as the double, tends strongly to prove that for wintering the single walls are equally as good as the double. And the fact that in summer, with myself, I find no trouble with too much heat, convinces me that, taking all in all, the single walls "bear the palm."

Take this, please, for what it is worth. I have tested the matter. You, however, may wish to test it also. Do so, and give the results you find. Yours very truly,

North Attleboro, Mass. JOS. E. POND.

Bro. Pond, I am very much obliged to you, indeed, as your experience will save me considerable, as I was aiming to try it this year and report for the benefit of our Southern bee-keepers, so I take the liberty to give your letter to the public and maybe it will help some one else.

JENNIE ATCHLEY.

Free Again—Is It Paralysis?

MRS. ATCHLEY:—My four years as prosecuting attorney for the Sixth Judicial District of Texas, has just ended, and I am once more a free man. I shall rest up six or eight months before taking up my law practice. During all this time I could only catch a chance occasionally to run out to father's, at Box Elder, and my folks say when I made them a visit that I would camp with the bees and had little to say outside of my bee-keeping, which was very nearly correct. When I settle down again I will certainly have bees.

The American Bee Journal these days is more entertaining than Shakespeare or Dickens, and your department—"The Sunny Southland"—always gets my first attention. The Bee Journal I always read the first night it comes. I think I will get Gleanings, too.

My bees more than doubled last year, In the spring there was no honey, but in the summer and fall we got some nice honey. The Linden did not give us any honey last spring, and the drouth cut the sumach and huckleberry short.

Since the frost I have some colonies that have quite a number of dead bees in front of their hives. This occurred from Dec. 1st to the 10th. Is it probable that my bees have paralysis? From reading lately of this malady, I look upon it as a terror. N. P. DOAK.

Box Elder, Tex., Jan. 3.

Friend D., I am indeed glad that you find pleasure in reading my department and the American Bee Journal, and I shall try to make my department more and more interesting. I am looking forward to the time soon when I shall have more time to devote to this department. Such kind words of appreciation is good tonic to stimulate one and help to strive harder to please and instruct bee-keepers, and especially beginners.

I do not think your bees have paralysis, from your description. But I rather think they died from natural causes. Sometimes it turns cold very suddenly and catches the bees scattered all over their combs, and some few, say a teacupful or more, may think the spell will be over soon and cluster on an outside comb of sealed honey and freeze to death; when it turns warm the other bees carry them out and drop them at the entrances. Then again some colonies go into winter with more old bees than new ones and they die off as a natural consequence.

If your bees have paralysis, you can quickly determine it, by watching the bees at the entrances any warm day. Some of the bees will crawl out on the alighting-boards, and shake and tremble and stagger about, as though they were intoxicated, and finally turn on their backs and swell up and die. Then some may not have the disease as bad as others, and may continue to fly for a while and lose all the hair off their backs and look a shiny black, and this last seems the first stage of the disease. The bees of the colony who are not diseased may be seen trying to pull out these shiny bodies by the wings, even when they can yet fly, seeming to know that they ought to be out. JENNIE ATCHLEY.

Mr. Wm. McEvoy and Family.

Referring to the group shown on the first page of this number, I would say that Mr. McEvoy, as most of the readers of the American Bee Journal know, is the efficient Foul Brood Inspector for the Province of Ontario, Canada. Following are the names and ages of the interesting group of children found in the picture: Jennie, who is standing, is the oldest, being 19. William John is also standing—age 13. Nettie is standing close to Mrs. McEvoy, and is 7 years old. Ewart, sitting in front, is about 6. Little Gemmill is sitting on the arm of the chair, and his age is 4. This latter young man had the misfortune of falling down cellar the past fall, with the result that his left arm was broken. I could symyathize with him, for I also had a broken left arm when I was 16. I hope little Gemmill's arm will recover as fully as did mine.—EDITOR.

Mr. F. L. Thompson's Objection.

Tut, tut, my dear boy! Don't go into conniptions over that trifle you quote on page 4. "*Ladies* and men" may sound a little peculiar. The terms seem to convey more respect for our sex and less for the blessed creatures to whom far greater consideration is due. I suppose you would suggest that I had best have used the term "women," and I quite agree with you, for to my mind no word conveys so truly the noble nature of our God-given mothers, wives and sisters. No title has ever been conferred more comprehensive, more expressive, more dignifying than the simple and elegant one of *woman.* All that is worthy in human nature is comprised in that brief, trite noun. Of course you did not infer that I should have used the superfluous "gentlemen" instead of the more simple "men." I give you credit for more discretion than that you would ascribe to me such folly. All the embellishment the name requires is the *actions* that give character to the name.

Trusting your interpretation is corrected, and received in the kind spirit intended, I am, Very gratefully yours,

DR. PEIRO.

OLDEST BEE PAPER IN AMERICA — THE AMERICAN BEE JOURNAL — ESTABLISHED IN 1861

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Dr. C. C. Miller	"Questions and Answers."
Mrs. Jennie Atchley	"The Sunny Southland."
"Gleaner"	"Among the Bee-Papers."
"Bee-Master"	"Canadian Beedom."
Dr. F. L. Peiro	"Doctor's Hints."

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Editorial Comments.

My Sincerest Thanks are hereby tendered to all who have written me such earnest and kindly words of appreciation of my efforts, the past few months. Let me assure you all that they are highly prized indeed. If I were much inclined to the "big head," I should fear a heavy attack. But I think I have never been troubled in that way—in fact, I have never had time to consider myself very much the past 10 years. It has been work, work, work. Yet, I'm glad of it. It is a pleasure to work for bee-keepers, and especially when the effort is appreciated.

Many have sent in new subscriptions for the American Bee Journal, and in that very practical and substantial way have expressed their interest. Thank you, friends. You'll have a hard time trying to kill me with that kind of kindness, but no matter—keep right on. When the list of regular Bee Journal readers is in danger of getting too large, I'll promise to tell you in time so that you can stop before it's too late. In the meantime, don't let up on your efforts. I don't mean to let up on mine. I am yours for the *best* in bee-literature! For the "best" is none too good for so royal a people as bee-keepers.

The South Texas Bee-Keepers' Association was organized as a result of the fine Midwinter Bee-Meeting held at Mrs. Atchley's in Beeville, Dec. 27 and 28. There were only 80 bee-keepers present, owing to unfavorable weather. Many more were expected.

The officers elected are as follows: President, Mr. Atchley; Vice-President, S. D. Hanna; Secretary, F. A. Lockhart; and Treasurer, W. O. Victor.

A full report of the convention will appear soon in Mrs. Atchley's department of the Bee Journal. The next meeting will be held at Wharton, Tex., June 10, 1895.

"Farmers' Institutes and Their Relation to Apiculture," is the heading of an interesting article written by Rev. E. T. Abbott for the December Bee-Keepers' Review. Mr. A. has had considerable experience in that line, and knows whereof he speaks. He says that such institutes may be made of very great advantage to apiculture, *if* the proper person is selected to present the subject at the meetings. It's an endless topic, and requires an exceptionably able man or woman to do it justice. Mr. Abbott filled the bill pretty well in Missouri last fall.

"Gov. Secor," is what some Iowa people are thinking of calling Hon. Eugene Secor a little later on. It sounds well, especially as it would be a case of the office seeking the man, rather than the opposite, which is too often the fact. Mr. Secor would make a strong candidate, no matter what the office in view.

Many Encouraging Expressions of appreciation have come to this office lately, and particularly since Jan. 1. I want to say that I prize them all very much, and regret that there is room in these columns for only a few of them. Here are some samples, referring to the new form of the American Bee Journal:

Friend York:—I congratulate you on a much improved appearance of the American Bee Journal.—Chas. F. Muth, Cincinnati, Ohio.

No. 1 for 1895 is received. I like its make-up very much. This time the improvement is truly visible.—C. H. Chapman, Cohoctah, Mich.

I congratulate you on the improved looks of the American Bee Journal.—E. T. Flanagan, Belleville, Ill.

The first number of the American Bee Journal for 1895 has appeared in enlarged form. It is much improved in other ways.—American Bee-Keeper.

Dear Mr. York:—You are the "beatin'est" man for a change! I thought *that* was woman's prerogative. However, I'm not the one to find fault, as long as every change is for the better. That old last year's cover was too deep for me. Was it mistletoe and honey-comb, or holly-berries and linden? However, I'll not abuse the departed. This present cover, he who runs may read—the eagle, the flag, the honey-bee and the hat-pin. The pin having two heads doesn't destroy its significance. What a happy combine! Did any one lie awake nights to study that up? We enjoyed reading this number (Jan. 3) more than usual. It was such a strong, bright number. Very sincerely,
Center Chain, Minn. Mrs. B. J. Livingston.

Trousers Clasps, such as bicycle riders wear just above the ankles, are also a good thing to prevent the bees crawling up inside the trousers. Mr. S. M. Keeler, in the American Bee-Keeper, tells of this. It's a kink worth knowing.

Editor Ernest R. Root gives in Gleanings a good picture of Mr. N. E. France (of the firm of E. France & Son, Platteville, Wis.) in connection with a delightful account of his visit last fall to the apiaries owned and operated by these excellent Wisconsin bee-keepers. They prefer the Carniolan bees, and use them almost wholly in their apiaries. Editor Root says:

They find the barrels are the best packages for large amounts of honey, and, when properly coopered and cared for, afterward give but little trouble from leakage. They do not need to be waxed inside, but should become thoroughly dried, and the hoops should be driven down before filling the barrels with honey. They had had, for experiment, some large barrels made, holding 500 pounds and over; but these were too heavy and bulky to handle. The smaller size, holding about 300 pounds, was much better. The door of the honey-house communicating with the apiary was on a level with the ground. The other door was just opposite, facing the roadway, and was just high enough so a barrel could be rolled from the floor into a wagon-box.

The North American Convention Report is still just where it was left in the number of the Bee Journal for Dec. 20, 1894. I have not received a bit more copy up to to-day (Jan. 11). Probably when ex-Secretary Benton gets through "hibernating" down in Washington, he'll be able to send in the balance of the Report, which he has been holding since the first week in November, 1894. The Report is the property of the Association, ordered by it to be printed in the American Bee Journal, and Mr. Benton is making one of the biggest mistakes of his life when he persists in holding back that Report.

The Bees Still There.—It is learned through Mr. D. D. Daniher, a subscriber in Madison, Wis., that a bee-keeper in that place had been complained about to the city council, a petition being presented asking "that the council pass an ordinance to prohibit or restrict the keeping of bees in the city."

Mr. Daniher saw the owner of the bees, who told him that mischievous boys in the neighborhood had pelted the hives with stones, thus arousing the bees, the dents of the stones showing clearly on the hives. Mr. D. then spoke to the mayor about it, who had kept bees for 20 years right in the same city, and had never had the least trouble with any one on account of keeping bees. He told the mayor that he (Mr. D.) hoped the complaint would be carefully considered before prohibiting the keeping of bees inside the city limits. The result of Mr. Daniher's efforts is shown in the fact that "the petition died in the committee's hands."

Very few cities are so fortunate as to have an ex-bee-keeper as

mayor. Oftener city mayors are more familiar with political wire-pulling than with the habits of the harmless honey-bee. But bee-keepers will be glad to "score one" for Madison's sensible mayor.

Mr. John Thorne Calvert, the energetic business manager of The A. I. Root Company, and new Treasurer of the North American Bee-Keepers' Association, is pictured and written up in fine style in Gleanings for Jan. 1. Mr. Calvert seemed to think the household "queens" on this side the line superior to those "reared" in his native land, for he had been over here only five short years when he decided he must possess one of Mrs. A. I. Root's "golden daughters." Canada may think she's ahead on one kind of honey, but I'm sure it would appear that Mr. Calvert *preferred* a certain United States "honey." But the United States is *one* ahead this time, as Mr. Calvert has since been a member of Uncle Sam's big family.

Bee-Keepers Called "Bar-Keepers."—About the best joke (?) heard of lately was perpetrated by the Chicago Inter-Ocean of Dec. 19, 1894, when it published the following libelous (?) "special:"

NORTHERN ILLINOIS BAR-KEEPERS.

ROCKFORD, Ill., Dec. 18.—*Special Telegram.*—The annual meeting of the Northern Illinois Bar-Keepers' Association convened in this city to-day, and will continue over tomorrow. At to-day's session a number of essays were read, among them one by Dr. Miller, of Marengo. President Herrick, Secretary B. Kennedy, and Treasurer O. J. Cummings read their annual reports, showing the Association to be in a prosperous condition. The attendance is the best the Association has ever had.

Bar-keepers! My, but wasn't that a rough one? The idea of calling the strongest kind of temperance folks "*bar*-keepers!" Surely, wonders and mistakes will never cease. This "bar" business is far ahead of the St. Joseph "variety show" episode. Dr. Miller is now "one worse" than A. I. Root. But the only reason for it is, that "A. I." wasn't near enough to "get there," too, or he'd come in for an equal share of the "joke."

Among the Bee-Papers

Conducted by "GLEANER."

THE AMERICAN BEE JOURNAL FOR JAN. 3.

Here comes a package in the mail that is too long to be one of the bee-papers, but there is a familiar look about the directions on it. Sure as anything! it's the American Bee Journal.

"How do I like it?" Don't like it at all. 'Tisn't our old friend with its familiar look, and we always look with an evil eye upon any usurper that attempts to take the place of a long cherished friend like "the old reliable."

But now I'll throw all prejudice aside, and try to look upon it as a new candidate for the favor of bee-keepers, and not as trying to take the place of an old friend, and then see what there is in it worse or better than the old friend.

In the first place, the size is not so convenient. The nearer a bee-paper comes to the size of an ordinary book the pleasanter it is to handle. In the second place—second place—in the second place, it is—well, now, really I don't know that I can name any other objection.

As to points of superiority, the better paper is quite an item. It has a good "feel," and there's some comfort in that when handling a paper. And then that better paper means better pictures. Possibly more of them, for I think some of the new kind of pictures can hardly be printed on the poorer kinds of paper. Leafing over the pages the headings have a pleasant look, and the neatly-printed pages are a pleasure to the eye. On the whole, all that's wanted is probably a little familiarity to make it liked away ahead of the old. And I confess every time I look it over I like it better.

Now for a look at the contents. What fine pictures of those two bright Frenchmen. By the twinkle in the eye of the younger he's getting ready for a joke on some one. Glad to see the elder booked for a series of articles instead of sending off all his best thoughts across the ocean.

Messrs. Demaree and Benton want a new set of Vice-Presidents for the Bee-Keepers' Union. Good idea, and a good list of names nominated by Mr. Benton. The published list of those who were voted for, but not elected, last year, contains a number of available names also.

Well, well, isn't here an innovatiou as is an innovation? In Editorial Comments the American Bee Journal is mentioned, and it isn't AMERICAN BEE JOURNAL, nor *American Bee Journal*, nor even "American Bee Journal," but just American Bee Journal. But then, come to think of it, is there any reason why the name of a paper should be capitalized, or italicised, or put in quotation marks, any more than the name of a person, town, State, or any other proper name?

But shades of editorial highfalutinism! if here isn't the personal pronoun, first person singular, instead of the regular, time-honored editorial "we!" And this from the "we"-est man in the whole fraternity! Got clear down from his high horse right among his readers! Well, we'll like him all the better, even if we don't stand in quite so much awe of him.

A new departure in the way of a department by a Bee-Master from that "strip or belt which has no superior as a honey-field anywhere." There's the glove thrown down, Mrs. Atchley! Well, that quite a "strip or belt" separates Texas from Canada, or there might be a case of premature baldness in the northern country. Bee-master seems master of the English language as well as of bees.

THE HEALTHFULNESS OF HONEY.

Harry Lathrop, in Gleanings, quotes the following from a health journal:

"Honey is concentrated nerve food in its very sweetest form; and if people would use honey on their bread, instead of butter, they would have more vitality, better complexions, and a more even disposition. The ancient patriarchs regarded honey as the cream of food; and so it is if eaten lightly. Honey-eaters are the kindest, best dispositioned, and most benevolent of people."

EXPERIMENTS IN "FEEDING BACK."

R. L. Taylor continues his interesting reports in the Review, and in the December number he appears not entirely discouraged as to feeding back to have sections completed. The great objection that sections so completed are in the bad habit of granulating he thinks may be overcome, but suggests no means of overcoming. Likes milk-pan feeder to avoid the twang giving by using the wooden feeder. Experimented with two colonies, putting on 69¾ pounds of honey in unfinished sections, and sections with foundation only. Fed 218¾ pounds extracted honey, adding 15 to 20 per cent. of hot water. Finished sections weighed 205 pounds, making 1.61 pounds fed for every pound stored. Thinks the colonies were the better for the feeding, having reared more young bees.

Canadian Beedom.

Conducted by "BEE-MASTER."

Mr. J. T. Calvert, Ex-Canadian.

Gleanings for Jan. 1, contains a photogravure and life-sketch of J. T. Calvert, the secretary and treasurer of The A. I. Root Co. It will be a surprise to many Canadian bee-keepers, as it was to Bee-Master, to learn that Mr. Calvert is a native of the province of Ontario. He was born in Victoria County, Dec. 7, 1862. His grandparents on both sides were from old England, so he comes of good stock and was born well. I beg to suggest that Editor York borrow the picture, copy the sketch, and insert them in the Canadian Beedom department of the American Bee Journal at an early day.

It would also be interesting to know how many prominent bee-men in the United States hail from Canada. I believe that Mr., now Dr. Gallup, the father of the Gallup hive, went to Orchard, Iowa, from the province of Quebec; but whether he was a native of that province or not I do not know. Bee-Master would be glad to hear from him and any other "lost sheep" who have wandered across the line.

A Honey-Bee Concert, Etc.

The same issue of Gleanings also contains an article from F. A. Gemmill, of Stratford, Ont., calling attention to the forthcoming meeting of the Ontario Bee-Keepers' Association, which is about to be held in the city where he resides. He expects the meeting will eclipse all former ones. He and John

Myers, also a resident of Stratford, are working hard to make the meeting a grand success. Mr. Gemmill is one of our best bee-keepers, and has the neatest apiary I have seen in Canada. I will not say it is the neatest in the country, because I have not seen them all, but it certainly presents a most creditable appearance, and the owner takes great pride in it, as he is justly entitled to do.

Mr. Gemmill's "hobby," by his statement, is a honey-bee concert, which, with Mrs. Gemmill's kind assistance, (I like to see a man polite to his wife,) he is getting up in connection with the forthcoming meeting. The music and "Mr. Holtermann's pow-wow," as Mr. Gemmill rather irreverently calls Mr. H.'s promised magic lantern exhibition, to be given the same evening, are features enough to draw a big crowd of the general public in addition to the bee-keepers who will be present. Mr. Holtermann's part of the entertainment promises to be very interesting.

It is not intended to get up a *furore* about bee-keeping to induce a rush into business, but to enlighten the general public about the nature and habits of bees, in order to dispel the amazing ignorance there is in regard to these insects. Information will be given as to the manner in which bees secrete wax scales, build comb, gather and ripen honey, nurse the larvæ, pack pollen in the baskets while on the wing, also how it is deposited in the cells for future use, the sting and its functions, and many other matters of interest to the general public.

A Little Innocent Rivalry.

Editor York proposes "an innocent rivalry between the departments conducted by Mrs. Atchley and Bee-Master." He says, "They are far enough apart to be equally fair." As a matter of fact, however, it is utterly impossible for us both to be "equally fair," because one belongs to the "fair sex" and the other doesn't. In my school-boy days, one of the copperplate copies set me was, "Emulation is a noble passion." I hope we shall emulate all that is good in one another's departments, and both do all we can to make the American Bee Journal *first* in its class.

"Canadian Rambler" in the North-West.

We have a Canadian "Rambler" who has been traveling through the province of Manitoba and the North-West territories, and who seems like the "Rambler" who so often appears in Gleanings, to be a bee-keeper, for he says that in the course of his travels he has "occasionally met a brother bee-keeper." From an article of his in the January issue of the Canadian Bee Journal it may be fairly concluded that bee-keeping can be successfully carried on even in regions, where as he says, "the mercury loves to creep down out of sight, or in other words 40 or 50 degrees below zero." The account he gives, is as follows:

During last winter and this, so far, it has been my privilege to do a good deal of travelling through the province of Manitoba and North-West territories, and have occasionally met a brother bee-keeper. I thought that possibly if I were to send you a few lines in reference to bee-keeping in a part of our country where the mercury loves to creep down out of sight, or in other words, 40 or 50 degrees below zero, it might be interesting to you and your readers. I had about formed in my own mind a poor opinion of this western part of our country as far as bee-keeping was concerned, but thought best to interview two or three parties who have a practical experience in connection with our industry here, before writing you.

I wrote two gentlemen here, who I believe have as good an idea of bee-keeping as any one in the Province, and received a very satisfactory answer from one of them, the substance of which I give.

Mr. Gilbert Gunn was born in Manitoba, and has kept bees here for the last seven years. He has used the Heddon, Jones and Combination, but prefers the Jones single-walled hive and is using that now. Mr. Gunn tells me he never saw a tame bee till he started bee-keeping seven years ago, and he knew little or nothing about them at that time, and, having all to learn, he has, as we may well suppose, seen the shadow as well as the sunshine of bee-culture.

He worked away with fair success till the fall of 1891 found him with 16 colonies, which he wintered in the cellar, and took out 12 in the spring, from which he received 20 swarms and 1,200 pounds of honey. The following fall he did not prepare the bees properly for winter and lost, as a consequence, 16 colonies. During the last two years Mr. Gunn has not paid the attention to the bees that they merited, consequently they have become greatly reduced in numbers, he having only four colonies last spring, one of which he sold, leaving him three, from which he took 435 pounds of extracted honey.

He keeps the Italian bees, and winters them in the cellar under his house, and said in answer to the following question,—Do you not find the winter very hard on the bees?—"As far as I know it is not as hard as the Ontario winter. Of course we can't winter bees outside."

His honey is all extracted, and gathered principally from the Canada thistle, golden-rod and wolf-berry, and is mostly bright in color, the golden-rod however being dark.

I am pleased to find that they have prizes offered for honey at the Provincial Exhibition held in Winnipeg, as well as down east, and it appears that Mr. Gunn has not been letting the other bee-keepers have it all their own way with the prizes, as he got the best of one of Mr. D. A. Jones' right-hand men.

The prairie here in summer is said to be literally covered with wild flowers for several months, and of course the bees would gather some honey from them, but I have wondered if the nectar was in proportion to the flowers. The almost unceasing hot winds of summer, and terrible cold of winter, I had thought too much for any bees, but Mr. Gunn's experience says not so. CANADIAN RAMBLER.

I knew before that bees could be and were being kept in some localities of the North-West, but supposed that it must be done under difficulties. In my "Salutatory" I spoke of Canadian Beedom as "a comparatively narrow strip or belt stretching from the Atlantic to the Pacific." Mr. Gunn's experience widens the strip or belt considerably, and now one is curious to know how far north "the little busy bee" can be made a success. Possibly as far north as flowers secrete nectar. How far north is that? Like Dr. Miller, "I don't know."

The Des Moines Incubator Co., of Des Moines, Iowa, has issued a neat catalogue of 36 pages, illustrating and describing fully their incubators and brooders. It also shows the principal stages of the development of the chick from the egg, in a series of pictures. Better send for this catalogue, and see what the above firm have to offer.

Sample Copies of the "American Bee Journal" will be mailed free to all who ask for them. The next three or four months will be just the time for getting new subscribers, and if any of our friends can use sample copies among their bee-keeping neighbors, in order to get them as new subscribers, we will be glad to mail the samples, if the names and addresses are sent to us. Better educated bee-keepers will mean better things for all.

The Seed and Plant Guide issued by H. W. Buckbee, the noted seedman of Rockford, Ill., is one of the finest we have ever seen. It contains 120 pages, is beautifully illustrated, and is complete in every particular. Send for it. Your name and address on a card will get it. See advertisement on page 44. Be sure to mention the Bee Journal.

Binders for this size of the American Bee Journal we can furnish for 75 cents each, postpaid; or we will club it with the Bee Journal for a year—both for $1.60. We have a few of the old size (6x9) Binders left, that we will mail for only 40 cents each, to close them out.

A B C of Bee-Culture—just see the magnificent offers on page 15. Every one of our subscribers can now have a copy of that splendid book

Cole's Garden Annual for 1895, treating of Garden, Farm and Flower Seeds, is an 80-page pamphlet of unusual neatness and beauty. It offers a full line of seeds. Address, Cole's Seed Store, Pella, Iowa, and get a copy of his nice Annual.

The Amateur Bee-Keeper is the name of a neat 64-page pamphlet, 4x7 inches in size. It is written by that practical Missouri bee-keeper, Mr. J. W. Rouse, and published by the Leaby Mfg. Co. It should be read by every bee-keeper, whether an amateur or not. A new and second edition has just been issued, the first 1,000 copies being disposed of in only two years. It is nicely and fully illustrated. Price, postpaid, 25 cents; or clubbed with the American Bee Journal for a year—both, $1.15.

Great Premiums on page 33!

Convention Notices.

COLORADO.—The 15th annual meeting of the Colorado State Bee-Keepers' Association will be held on Monday and Tuesday, Jan. 21 and 22, 1895, in Denver. H. KNIGHT, Sec.
Littleton, Colo.

NEW YORK.—The annual meeting of the Ontario Co., N. Y., Bee-Keepers' Association will be held in Canandaigua, N. Y., Jan. 25 and 26, 1895. Come early. Everyone come:
Bellona, N. Y. RUTH E. TAYLOR, Sec.

ONTARIO, CANADA.—The annual meeting of the Ontario Bee-Keepers' Association will be held at Stratford, Jan. 22, 23 and 24, 1895. All bee-keepers are cordially invited to attend. W. COUSE, Sec.
Streetsville, Ont.

MINNESOTA.—The regular semi-annual meeting of the Southern Minnesota Bee-Keepers' Association will be held on the first Monday in May, 1895, at LaCrescent, Minn. All bee-keepers invited. E. C. CORNWELL, Sec.
Winona, Minn.

PENNSYLVANIA.—The Venange County Bee-Keepers' Association of northwestern Pennsylvania will hold their 2nd annual meeting in the City Hall at Franklin, Pa., on Jan. 28, 1895, at 1 o'clock p.m. All interested send for program. C. S. Pizer, Sec.
Franklin, Pa.

WISCONSIN.—The 11th annual meeting of the Wisconsin State Bee-Keepers' Association will be held in the Capitol, at Madison, Feb. 6 and 7, 1895. All bee-keepers are requested to attend, whether they receive a formal notice or not. H. LATHROP, Rec. Sec.
Browntown, Wis.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association on March 16, 1895, at Goodne's Hall, in Bronson, Bourbon Co., Kans. It is the annual meeting, and all members are requested to be present, and all bee-keepers are cordially invited. J. C. BALCH, Sec.
Bronson, Kans.

CALIFORNIA.—The California State Bee-Keepers' Association will hold its fourth annual meeting on Tuesday and Wednesday, February 5 and 6, 1895, at the Chamber of Commerce, corner of 4th and Broadway, Los Angeles. Programmes will be ready Jan. 15.
PROF. A. J. COOK, Pres.
J. H. MARTIN, Sec., Bloomington, Calif.

VERMONT.—The next annual convention of the Vermont Bee-Keepers' Association will be held in Middlebury, Vt., on Jan. 30 and 31, 1895. Programs will be prepared and mailed later. Let every Vermont bee-keeper begin NOW to prepare to attend, and all those who can reach Middlebury, whether you live in Vermont or not, we want you to come.
Barre, Vt. H. W. SCOTT, Sec.

Old Bee Journals.—We have quite a number of old copies of the American Bee Journal, extending back perphaps 10 years. We will send these out at *one cent a copy*, all to be different dates, and back of Jan. 1, 1894. Remember they are *odd* numbers, and you must let us select them. We cannot furnish them in regular order, that is, one or two months' numbers without a break, but will mail you as many single or odd copies as you may wish, upon receipt of the number of cents you want to invest in them. They will be fine reading for the long winter evenings, and many a single copy is worth a whole years' subscription. Better send for ten or more copies, as a sample order. Only a cent a copy, *back* of Jan. 1, 1894.

Wants or Exchanges.

This department is only for your "Wants" or bona-fide "Exchanges," and such will be inserted here **at 10 cents a line** for each time, when specially ordered into this department. Exchanges for cash or for price-lists, or notices offering articles for sale, will not be inserted here—such belong in the regular advertising columns, at regular rates.

WANTED—To exchange, Pure St. Bernard Pups, bred from registered stock. Will exchange for any thing useful. Would like a portrait lens. SCOTT BRILLHART,
3A2t Millwood, Knox Co., Ohio.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Dec. 27.—Up to the present the sales on honey have met with our expectations. We have received considerably more honey than we figured on handling, owing to the short crop report, and we think the early shippers reaped the benefit. However, we are now getting the average price, viz.: Fancy, 15c.; white, No. 1, 14@13c. Extracted, 6@7c.
Beeswax, 28@29c. J. A. L.

CHICAGO, ILL., Jan. 3.—As usual, the volume of trade in honey is small at this season. But our stock is not heavy, and soon as this month is past we expect a demand that will clean out all present and prospective offerings. Comb sells at 14c. for good white; fancy brings 15c.; dark grades, 8@12c. Extracted white, 6@7c.; dark, 5@6c.
Beeswax, 27@28c. R. A. B. & Co.

NEW YORK, N. Y., Dec. 20.—The market for comb and extracted honey is good, and the supply equals the demand. Fancy clover and buckwheat sells best; off grades are not quite as salable; and 2-pound sections are little called for. We quote as follows: 1-pound fancy clover, 13@14c.; 2-pound, 12½@13c.; 1-pound white, 12@12½c.; 2-pound, 12c.; 1-pound fair, 10@11c.; 2-pound, 10@11c.; 1-pound buckwheat, 10@11c.; 2-pound, 9@10c. Extracted, clover and basswood, 6@6½c.; buckwheat, 5@5½c.; Southern, 50@60c. per gallon. Beeswax, scarce and in good demand at 29@30c. C. I. & B.

CINCINNATI, O., Jan. 7.—Demand for honey is very quiet since the holidays, and prices are unchanged. Comb honey brings 14@16c. for best white, and extracted 4@7c.
Beeswax is in good demand at 23@28c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, Mo., Jan. 7.—The demand for both comb and extracted is light. Supply good. We quote: No. 1 white comb, 1-lbs., 14@15c.; No. 2 white, 12@13c.; No. 1 amber, 13c.; No. 2 amber, 10@11c. Extracted, white, 6@6½c.; amber, 5@5½c.; dark, 4½c.
Beeswax, 22@25c. C. C. C. & Co.

BUFFALO, N. Y., Dec. 17.—The demand for honey is very quiet. We quote: Fancy, 13@14c.; choice, 11@12c.; others from 8@10c. Liberal amount of stock in market. The prospects are that the demand will be very light until after the holidays. Extracted is moving very slowly at 5@7c. B. & Co.

NEW YORK, N. Y., Dec. 31.—The demand for comb honey has been very light of late and has now almost dwindled down to nothing. The supply has been accumulating and there is a large stock on the market. In order to move it in round lots, it will be necessary to make liberal concessions from ruling quotations. We quote: Fancy white, 1-lbs., 13c.; off grades, 11c.; buckwheat, 9c. We have nothing new to report in extracted. It is moving off slow and plenty of stock on the market, with more arriving. Beeswax is steady and finds ready sale on arrival at 30c. per pound. H. B. & S.

RUDY'S PILE SUPPOSITORY

Is guaranteed to cure Piles and Constipation, or money refunded. 50 cents per box. Send two stamps for circular and free Sample to MARTIN RUDY, Registered Pharmacist, Lancaster, Pa. NO POSTALS ANSWERED. For sale by all first-class druggists everywhere. Peter Van Schaack & Sons, Robt. Stevenson & Co., Morrison, Plummer & Co., and Lord, Owen & Co., Wholesale Agents, Chicago, Ills.
Pease mention the Bee Journal. Nov15

Good Honey-Sellers ought to be needed now, and the little 32-page pamphlet, "Honey as Food and Medicine," has for years proven itself valuable in making repeated sales of honey. Its distribution will *create a demand* for the honey first, and then the bee-keeper can follow it up and supply that demand. Send to us for a sample copy, only 5 cents; 10 copies, postpaid, 35 cents; 50 copies, $1.25; or 100 copies $2.00. Try 50 or 100 copies, and prove their ability to aid you in disposing of your honey at a good price.

☞ See A B C offer on page 803.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.
J. A. LAMON, 43 South Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.
F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 28 & 30 West Broadway.
CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.
FRANCIS H. LEGGETT & Co., 128 Franklin St.

Kansas City, Mo.
CLEMONS-MASON COM. Co., 423 Walnut St.

Albany, N. Y.
H. R. WRIGHT, 326 & 328 Broadway.

Buffalo, N. Y.
BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.
CHAS. DADANT & SON.

Cincinnati, Ohio.
C. F. MUTH & SON, cor. Freeman & Central avs.

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Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Packing Bees in the Spring—Does it Pay?

Query 955.—Does it pay for the trouble to pack bees in the spring after taking out of the cellar?—Mich.

W. M. Barnum.—No.

J. A. Green—I think so.

Jas. A. Stone—I think not.

S. I. Freeborn—I think not.

Rev. Emerson T. Abbott—It would not pay me.

J. M. Hambaugh—I think not in my locality.

Dr. C. C. Miller—I don't know. I doubt if it does.

G. M. Doolittle—Some years, yes; others, no.

Dr. J. P. H. Brown.—I don't think it would pay.

H. D. Cutting—In many cases and situations, yes.

Rev. M. Mahin—I have never tried it, but I think not.

Mrs. J. N. Heater—If they are in single walled hives, *yes.*

E. France—I don't know. We winter our bees all out-doors.

Dadant & Son—Not usually, especially if they are in good condition.

B. Taylor—I have tested it fully several springs, and it never paid me.

R. L. Taylor—See account of experiment on that point in late Reviews.

Prof. A. J. Cook—Some years' experience in Michigan makes me think yes.

Mrs. L. Harrison—I never tried it. I think that the sun upon the hive is most beneficial.

W. G. Larrabee—I never had much experience with cellar-wintering, but I think not.

P. H. Elwood—That depends upon the hive, largely. With a warm hive it probably does not.

C. H. Dibbern—Possibly in some localities, but with me such packing has not paid for the trouble.

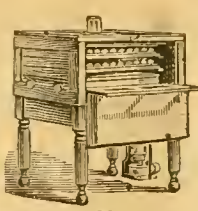
Mrs. Jennie Atchley—None of that business in my country, and in fact I never saw a chaff hive or a packed hive of any kind in my life, therefore I don't know.

Eugene Secor—Sometimes I have thought yes, and sometimes no. If we knew in advance just what kind of a spring we were to have, we could make better calculations.

G. W. Demaree—I live too far South to be authority on that point. In my locality the heat of the sun is worth more than packing, and the latter excludes the warmth of the sun.

J. E. Pond—I have never kept bees in a cellar, but should not suppose they should be taken out until they could fly safely. If they can do so, there can be no need for packing, I think.

Dr. G. L. Tinker—Yes, if you take them out early enough. You will save all the cost of packing in the amount of stores consumed. If I wintered bees in the cellar, they would be put out every year about the last of February, and packed in winter cases.



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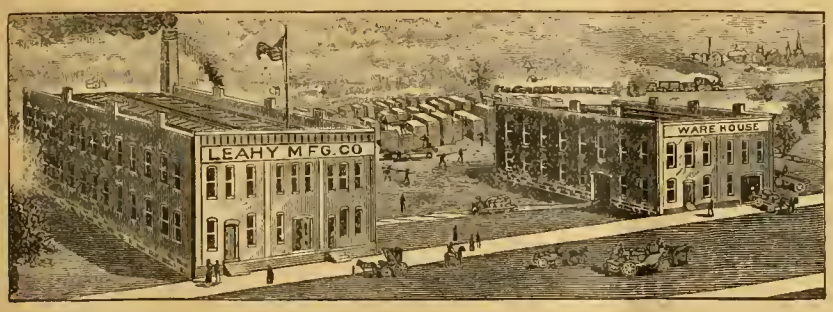

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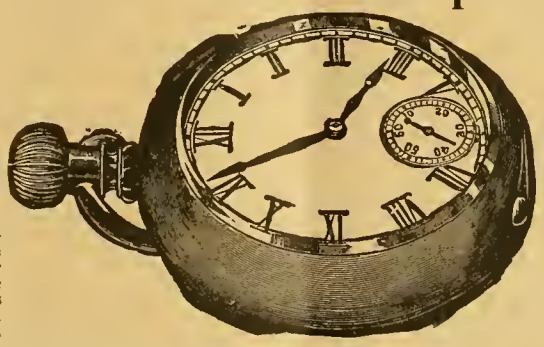

Address, GEORGE W. YORK & CO., 56 Fifth Ave., CHICAGO, ILL.

Doctor's Hints

By DR. PEIRO, Chicago, Ill.

Indigestion.

That's just what it is—indigestion. The child has simply been gorged with various foods without consideration as to its age and capacity for assimilation. Yes, that's the usual sign—peevish, pale about the lips, restless, picks at the nose, and will not eat. Well, no, it is not worms, as you suppose. Don't make matters worse by giving him a lot of vermifuges of all sorts. The child only requires to be let alone, after giving a warm bath and put to bed. Just let him live on a little milk and rice for a few days—nothing else—and he will soon be quite himself again. Be careful to feed him sparingly in the future.

Fainting.

Susie has fainted, eh? Well, sprinkle a little cold water on her face, and let her lie *down*. Don't set her up on a chair, or let a lot of people flock around her to prevent the free circulation of air. If you let her smell some camphor or hartshorn it will be well.

But then there must be some cause for the fainting. Likely she is physically run down. If so, her habits must be carefully looked after. The mother only can do this best. See that no tight lacing is practiced—that not too much work or study is done by her. She should have wholesome food, not pastry, and should retire early to get plenty of refreshing sleep.

Epileptic Fits.

Epilepsy is due to a variety of causes. It is often acquired in childhood, especially if the child has frequently been subject to convulsions. Or it may occur from continued insufficient nourishment. Anything that seriously weakens the general system in the formative period of life may give rise to epileptic fits in later years. Accidents, about the head, as a fall, or being hit by a hard ball, or stone, especially if it cracks or injures the skull, may result in epilepsy. Intemperance has often produced this result, and the use of tobacco has claimed its victims to this "falling sickness." A cure is only possible in few cases where surgical treatment is available. Medicines are, as a rule, only palliative.

Sprains.

"A sprain is worse than a break" is an old adage, and a true one. A fractured bone heals sooner and more completely than where the ligaments that hold joints together are badly stretched by spraining or twisting—as often happens to ankles and wrists. The free application of arnica tincture, snug bandaging the joint, and complete *rest* is the best treatment possible.

Nosebleed.

If you have nosebleed, stand up straight and apply something *cold* to the back of the neck—a piece of ice or cold piece of iron are best.

Corns and Bunions.

Painful corns and bunions should be painted with tincture of iodine, and wear cloth shoes or slippers until cured. Tight shoes only keep up the trouble.

Through a generous stroke of business policy on the part of The A. I. Root Company, we are enabled to make the readers of the "American Bee Journal" some *most unparalleled offers.* And by so doing we ought to double our list of subscribers before Feb. 1, 1895.

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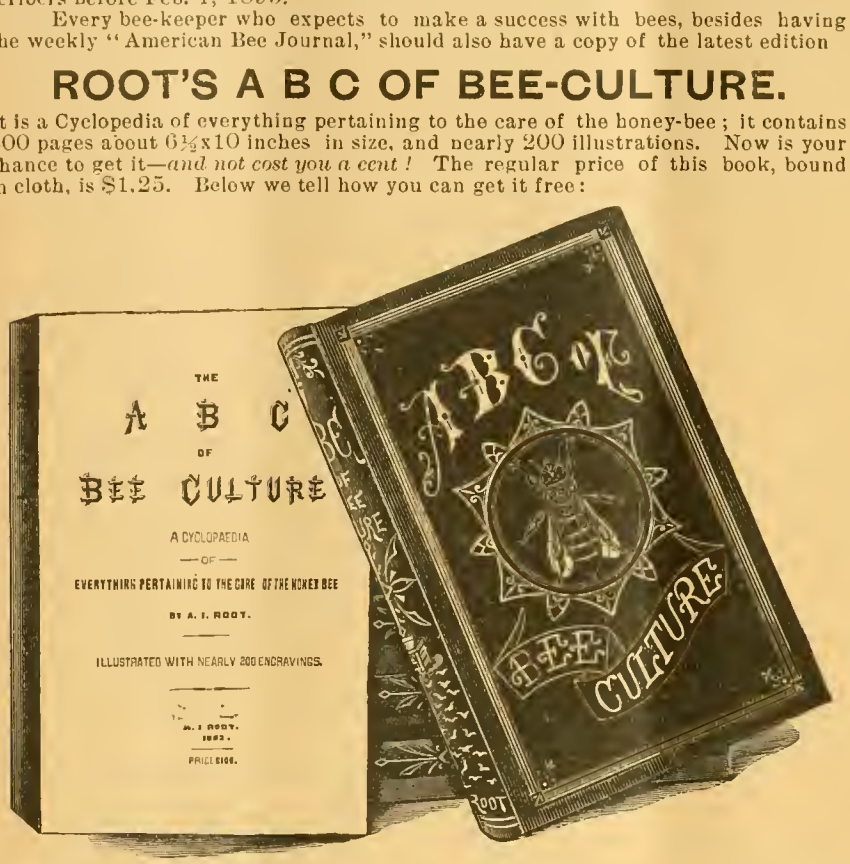
It is a Cyclopedia of everything pertaining to the care of the honey-bee; it contains 400 pages about 6½x10 inches in size, and nearly 200 illustrations. Now is your chance to get it—*and not cost you a cent!* The regular price of this book, bound in cloth, is $1.25. Below we tell how you can get it free:



We will mail you a copy of "A B C of Bee-Culture," bound in parchment cover—a very heavy paper—FREE for sending us *only Two New Subscribers* to the "American Bee Journal" for one year; or we will Club it with this Journal for a year—both together for only $1.60.

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General Items.

Honey-Flow All Right.

The other day I went out into the country to find some bee-keepers. I found a Mr. Stauffer, who has had bees for 40 years. He said he had 24 colonies of bees now, but used to have 60 in Simplicity hives. He said he could not sell his honey. I have got 16 colonies now, and can sell my honey, so I bought a little of him. The honey-flow here was all right last summer.

I am very much pleased with the American Bee Journal, and read it before any other paper that comes to my house.

NIELS N. ALLING.

Perth Amboy, N. J., Dec. 24.

Bees in Good Condition for Winter.

Bees were a failure this year. I had 90 colonies, and got 25 pounds of surplus honey. The bees have plenty of honey to winter on, and are in good condition, with plenty of young bees. D. C. MCLEOD.

Pana, Ill., Dec. 27.

A Method of Wintering Bees.

I had 25 colonies which I wintered last winter, and they gave me 2,000 pounds of honey, which I think was a fair amount. I have not lost a colony of bees in wintering for the last two winters. I have a new way of wintering, which I think beats all. Those successful bee-men are not going to tell all they know about the successful, all-the-year-around management of bees. This fact I do know: What I know I have gotten from this one and that one, and put it all together. I think I have the right way.

Now my bees came out *very* strong last spring. They flew and brought back pollen when the thermometer marked 40 degrees. Who can beat that?

My bees are bred from the native, best of blacks. I *am sure* that bee-paralysis comes from poor, weak, yellow queens that are "forced," or as I call them, "hot-bed queens."

Sugar is the very best to winter bees on, as there is far more oxygen in it than there is in the honey.

My frames are 11¼x11¾ inches, outside measure, standing frames. The hive is 14x20 inches, outside measure, 12 inches high, ⅞-inch top and bottom bar. I can have 1 to 11 frames, with the division-board crowded from behind. For wintering they are surrounded by 1½ inches of sawdust, and 3 inches in front, with the hive shoved back against the outside case, with a bridge in front for the bees to crawl under and get outside. Back of the division-board is a cushion of chaff. Sealed covers, and 10 to 12 inches of sawdust are on top of that. This is a hive for wintering. They are all packed in a clamp, with 1 foot of straw on the back, and a roof that will shed rain. Bees packed in this way will have access to every part of the hive in almost any weather, and will live, provided they have enough stores to last until they can get something in the spring.

DR. W. A. HAMMOND.

Madison, N. Y., Dec. 27.

Study Up and Work Up.

I cannot do without the American Bee Journal. I have the greatest hopes for next summer. I am preparing for it now, and shall have everything ready and up to the times. That is the reason I send for the American Bee Journal. Do you not think so, Mr. Editor? I think I hear you say, "Yes, study up, and work up, for the harvest while you have time." Yes, sir-ree, long live the American Bee Journal to tell us the new things and kinks, that we may keep a bee-line. FRED CARD.

Burns, Mich.

Bee-Keeping in Manitoba.

In these columns, not long ago, I boasted of being located the farthest north of any bee-keeper, and solicited correspondence with any one (if there was one) as far, or farther, north. Soon after, I received a letter from a bee-keeper in Manitoba—250 miles north of here—who has kept bees there for three years. Last spring he took 15 colonies out of the cellar, and increased to 24 colonies, took 1,100 pounds of honey, and they went into winter quarters with plenty of stores. He takes them into the cellar about Nov. 10, and carries them out on May 1. He gets 25 cents a pound for section honey, and 15 cents for extracted. He takes the American Bee Journal.

I should be glad to hear from others up north. MRS. MATE WILLIAMS.

Nimrod, Minn., Jan. 1.

The Season of 1894.

It was the driest in this section ever known. The season opened beautifully; the soft maples and box-elders bloomed in February, and the apples and cherries commenced to bloom on March 27. The weather continued fine up to about the middle of May, when it froze all the sets in many of the orchards, and then it turned dry and continued so up to June 16, when we had a fine rain; but it came out so hot after it, that it did very little good, so far as a yield of honey was concerned. So the bees just lived from hand to mouth, as it were, the rest of the season.

During July, August, and the forepart of September, my bees lived almost altogether on pollen from squash and melon vines, and rotten apple juice. They have averaged three pounds per colony, and even

then the hives were chock-full of bees and brood all the time.

I fed my bees on Sept. 15 100 pounds of sugar made into syrup, and at that time my 7 colonies did not have over 6 pounds of honey altogether in their hives. If there was, it was in the bees.

Two-thirds of the bees in this part of the country will be dead, as very few farmers have fed their bees, and so it is good-bye to all that are not fed.

The 3-banded Italians are the most in favor in this part of the country, as they resist the ravages of the bee-moth, and are gentler to handle.

Later on I may write of some of the large apiaries, their yields in a good year, and their management for comb and extracted honey. W. S. DONER.

Armour, Iowa, Dec. 24.

A Colorado Boy Bee-Keeper.

I saw Chas. Sanford's letter, and thought I would write. I had two colonies of bees until the past fall, when one of them died, having become queenless. The other stored $3.00 worth of surplus honey the past year. We do not have to put our bees in a cellar. We pack from four to six inches of chaff in the upper story, and leave the hive on the summer stands. My father is bee-inspector for Boulder county.

I wish Charles would say whether he has any bees of his own. We have a large solar extractor to extract the broken honey and wax; also a Novice extractor to extract frames and unfinished sections which we use for baits. ROY B. ADAMS.

Longmont, Colo., Dec. 31.

Too Dry for Nectar-Secretion.

In this part of Iowa the honey crop of 1894 has been the nearest a complete failure for many years—in fact, I think since the country was first settled. The great drouth was the cause of the failure. It was too dry for flowers to make a display, and when there was a few flowers, there was but little honey in them. Therefore but little or no increase, and the same can be said for the honey yield. I got none from my apiary. This I find a great disappointment at this time of year, both on the table and financially. I have had a number of calls for honey, but had to tell customers I had not taken an ounce for 1894.

I put 26 colonies into the cellar, but I know a part of them will require feeding before spring, when all may need it, unless we have a very early continuous bloom and warm weather. This feeding, I think, is a duty that all bee-keepers in the great drouth sections will want to look after if we want to save our bees, and have them in good condition for the season of 1895. I say to all, do not be discouraged.

J. W. SANDERS.

LeGrand, Iowa, Dec. 27.

Results of the Past Season.

In the fall of 1893 I placed in the cellar 24 colonies, and took out 22 in the spring of 1894, which were in good condition. But the season was connected with such severe drouth that they advanced but little in the way of storing any surplus honey, except a month or so in the fall. I got about 300 pounds of comb honey, and 200 pounds of extracted, which is now worth on the market 10 cents for comb honey and 8 cents per pound for extracted.

I placed, a month ago, in my bee-cellar, 22 colonies, which, so far as I can ascertain, are doing well. They all had the 10-frame Langstroth hive pretty much filled with honey and pollen when I placed them in the cellar, which is well ventilated by a flue and a 6-inch tile entering the ground on the farthest side of the orchard, and running to the cellar.

My bee-house over the cellar is 16x24 feet in size, and 14 feet high; is well built, and filled out between the 2x4 studding with sawdust, in order to keep the evenest possible temperature in the cellar where the bees are.

My bee-house, with similar dimensions to the above, was destroyed by fire about ten years ago, with about 75 colonies of Italian bees in the cellar, that were also consumed.

The weather here has held a somewhat unusual mild degree; as yet we have had no snow, and a limited amount of rain, and it seems almost a miracle to men who have lived here for 50 or more years, and never saw splendid fine weather at this season of the year.

My neighbor who keeps a few bees, and is somewhat inexperienced in bee-culture, told me the other day that his bees did not store any surplus, and he wanted some "rent" for grounds they occupied. So he took out the frames from two hives and shook the bees on the ground, and thus got honey for himself and family. That is one way. C. H. BRADER.

Sperry, Iowa, Dec. 27.

Prospects of a Prosperous Year.

The weather still continues wet here, and the prospects are excellent for another prosperous year. We have not had any real cold weather yet. There has not been sufficient frost to kill tender garden-plants. It is usual to have a cold snap here about Dec. 29, that would "do up" all the tender garden stuff. W. A. PRYAL.

North Temescal, Calif., Dec. 31.

An Old Bee-Keeper's Report.

I have fed the bees $40 worth of sugar the past fall, to get them to winter, and they are light now. I got 30 pounds of poor honey. Dr. Miller's case and mine are somewhat alike, only he had the most bees, consequently he had to feed the most sugar for winter. I have 60 colonies in the cellar under my house, put in on Thanksgiving day. Ate Thanksgiving dinner and went to meeting in the evening; did it all myself without the help of any one. How is that for a 77-year-old? Well, I did it with the helps that I have studied up. I have made it a study to rig up things for my ease and comfort. I like to handle bees, but must give it up soon. A. F. CROSBY.

Sheffield, Iowa, Dec. 27.

From One of the "Old Timers."

EDITOR YORK:—I have seen the names of several old bee-keepers in the American Bee Journal lately, but so far I am the oldest one. In the year 1834 I bought my first "hive" of bees—that was when the old "king bee" was supposed to rule in the hive, and the drones laid all the eggs, and the "neuters" brought the honey to the hive on their hind legs! At that time some would not sell bees for fear of selling their luck, and if one of the family died the bees must be told of it after sunset, else they would dwindle away and die.

After passing through a number of patent bee-hive swindles, and losing my bees every time, bee books and papers came around, and I tried to inform myself, and have been generally successful, but last summer's crop was small, but better than Dr. Miller's.

I have 61 colonies in the cellar, resting quietly. Of course I cannot handle heavy hives, but my interest in them is unimpaired. No job suits me better than hiving a swarm of bees. Having handled them more or less for 60 years, I must soon leave them in the hands of children and grandchildren. On Jan. 26 I expect to celebrate the 86th anniversary of my birth. Now, if there are any older bee-keepers anywhere in the United States (except Dr. Marshall, of Texas,) I would like to hear from them.

L. EASTWOOD.

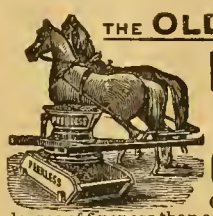
Waterville, O., Dec. 28.

A Binder for holding a year's numbers of the BEE JOURNAL we mail for only 75 cents; or clubbed with the JOURNAL for $1.60.

A "Kink" on Moving Bees.

I have recently moved 43 colonies of bees about 50 miles. The weather was favorable, so all came in good condition. Some of them were in movable-frame hives, with no self-spacing arrangement, and were not propolized sufficiently to risk their not shaking about. Instead of using notched blocks as some do, I found it was easier and just as effective to lay a small, tightly-rolled roll of burlap across each end of the frames before nailing fast the covers. It acts as a cushion by pressing down between the frames somewhat and holds them snug. I would have moved them by rail instead of by wagon, but the railroad company would not accept them in less than carload lots, and a car would have cost $52. This is a trifle less than the rate from Ft. Wayne, Ind., to Baltimore, Md. Transacting business with a railroad company, in this region, is quite a luxury. G. K. HUBBARD.

Riverside, Calif., Dec. 18.



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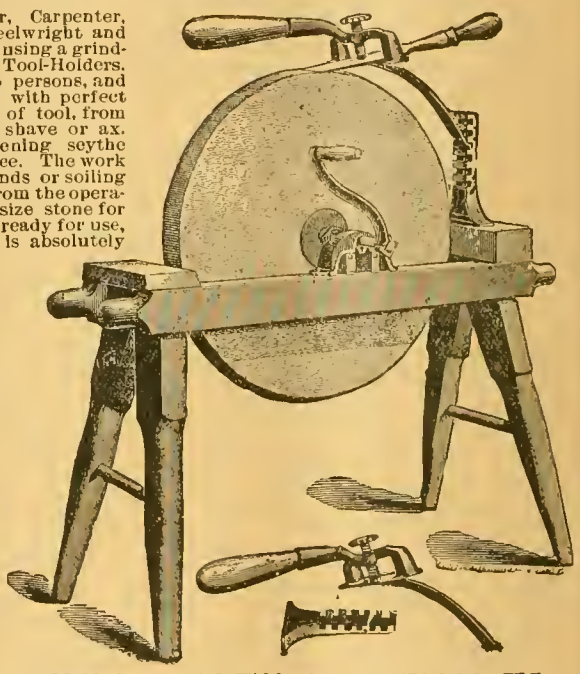

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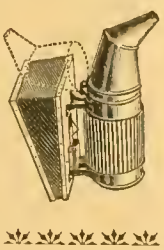

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35th Year. CHICAGO, ILL., JANUARY 24, 1895. No. 4.

Contributed Articles.

On Important Apiarian Subjects.

Bee-Keeping in the City of Philadelphia.

BY "STUDENT OF APICULTURE."

It is not generally known that bee-culture is a feasible city industry. Bees and honey are so suggestive of cows and clover that a city bee seems, at first thought, an anomaly. Yet when it is considered that these industrious creatures are known to go three, four, and even five miles for forage, it is plain there is no reason why a colony should not be housed on a roof in the city, as well as in a door-yard in the country. In all cities, even the largest, there are flowering herbs, shrubs and trees that serve as a partial food supply, and failing there, there is the open country within the working limit of the bee. It must be remembered, though, that a long foraging trip means fewer in number and a proportionately less harvest gathered by the city insect than by her country cousin, which is closer to the supply. The variation is, however, less than might be supposed. The records show that the average yield in an ordinary year is the same for both, but the harvest of 100 to 250 pounds to the colony is, as yet, only reported from the country bee.

That bee-keeping can be made profitable in the city has been demonstrated in Philadelphia, where a successful apiary has been conducted for several years. The owner is a young man, who, without giving his whole time to the enterprise, has managed, nevertheless, to add a considerable sum to his income by its means. The apiary is on the top of a four-story building in the business part of the town. Like the majority of city buildings the roof is flat, covered with painted tin, and is as hot a place in summer time as one would care to be in. The hives are not shaded at any time during the day and have not even the extra board, (sometimes in use for protection) over the top. The excessive heat is tempered in Philadelphia by a rather constant breeze, so that the discomfort in caring for the apiary is not so great as might be expected. In fact, the owner considers the heat an important factor in making choice marketable honey, for it helps to thicken or ripen the nectar quickly, and the bees cap it before the comb is darkened by their working over it. Clear honey in a white comb commands a higher price than the darker varieties, as nearly all know, but many apiarists think the latter really preferable, claiming that honey left long in the hive acquires a fine, rich flavor that is lacking in that taken from the sections as soon as it is capped.

The apiary in question comprises 34 colonies, the hives arranged in rows about three feet apart. The owner is indifferent as to the kind of hive used, providing it can be packed for winter. He has both the Simplicity and the Dovetailed chaff hives, each of which has its particular merits, but in either case he prefers the 10-frame size. Both of these hives can be packed around the sides with cork, chaff, or better still, pine needles, and are provided with chaff cushions to put in an upper story under the cover. With this protection, and a reasonable attention to the reports of the Weather Bureau, in order to keep the temperature uniform in the hive, the bees are comfortably wintered on the roof.

The honey is removed about once a month, and the yield compares favorably with the average yield of those that are country hived. Around Philadelphia the best honey-flow is in June, from clover, and lasts only four or five weeks. Later comes that of asclepias, asters and golden-rod. Between times there is not much doing, and sometimes feeding is resorted to, to keep the bees in working condition. The best colony in this roof apiary gave last year 72 pounds of comb honey; to this should be added the harvest of 10 pounds each, gathered by two swarms from the mother colony, so that, strictly speaking, the colony yielded 92 pounds in all.

The colonies averaged about 50 pounds each during 1892 and 1893. Much of this honey is kept for family use, while

DR. C. C. MILLER, MARENGO, ILL.

(Reproduced from a photograph taken in September, 1894.)

the rest finds a ready sale at 15 cents per pound. Supposing it were all sold, there would be a return of $255.00 from the 34 colonies, for honey alone.

The income from the increase is another item to consider. There is generally a demand for brood-comb of good stock at 75 cents per comb, queens 25 cents to $1.50 apiece, and strong colonies at from $3.00 to $6.00. In general, colonies may be doubled without affecting the honey crop, and innumerable queens can be reared if working for extracted honey. As to brood, two frames may be taken from a good working colony without materially weakening it. The minor products of an apiary are wax, vinegar, wine and candied honey, one of the finest sweets known to the confectioner.

These are all prepared for market with very little trouble, and find ready sale.

The running expense of the apiary is very small. The expenditure of both time and money is certaioly at a minimum of any business enterprise except that of a banana plantation in a tropical country. The latter, however, has a drawback in the way of finding a profitable consumer at the right moment; while the honey market for the city apiary is within, let us say, shouting distance at all times.

Nor is the initial expense great. If all goes well, the first year's honey crop will more than repay the capital invested. A novice is advised to be moderate in his ideas and to begin with one or two colonies. The experience gained in handling them is of more importance than book knowledge, and the natural increase of the bees will usually give enough to attend to the first year. After he thoroughly understands their habits and, equally important, the quantity and quality of the nectar supply from the local flora, he can undertake a more extensive apiary with both profit and pleasure.

Another thing the beginner must bear in mind is to have on hand from the first a fair supply of good working material. The apiary in question was started in 1888, with one colony of Italian bees, but through an insufficient supply of hives, section-boxes, foundation, etc., the owner lost both time and money in bringing it up to its present good condition. For awhile he kept his stock pure, but, unfortunately, within the last two years, some neighboring bees have made hybrids of all the colonies except one. So far as honey-gathering is concerned, it does not seem to make any difference, but it interferes with the sale of his queens since they are liable to be mismated.

In regard to swarming, a little more care is requisite in the city than in the country. In the apiary referred to the owner keeps his queens clipped, and makes a point of being around when a swarm is expected, for if the queen is left long exposed on the tin roof, she is liable to die from the heat. For the rest the management of city bees is identical with that of country ones. The local flora must be studied, the time of the honey-flow from the different nectar-bearing species known, and care taken to have worker-bees ready to take advantage of the harvest.

BEE-CULTURE FOR WOMEN.

As a business for women bee-culture has advantages that are well worth considering. It is an outdoor employment in which she need be engaged only in fine weather. The work can be systematized so there need never be a tax beyond her strength. Except in swarming-time, the work is never urgent, but can lay over a day, if necessary, without detriment. No special talent, or high grade intelligence is necessary; the ordinary fore-thought and prudence that the average woman puts into housekeeping will bring good results, and enable her to at least make a living with 50 colonies. The outlay is rather small and the returns usually almost immediate. In this latitude (Philadelphia) from November to April the bees are in winter quarters, and the keeper is free to engage in some other occupation.

Mrs. Jennie Atchley, of Texas, may be instanced as a successful bee-culturist, and Mrs. Lucinda Harrison and Mrs. Sarah Axtell, of Illinois, are well known in the fraternity. The Philadelphia Bee-Keeper's Association numbers among its members several women who have experimental apiaries, both in the city and country. Their reports will be looked for with interest. Philadelphia, Pa.

[Dr. Robt. H. Lamborn, of New York City, who is one of our subscribers, kindly sent us the foregoing exceedingly interesting contribution. In the letter accompanying the article he says: "I have no doubt that apiculture may be practiced successfully in towns, and that it will furnish a useful occupation for women."—EDITOR.]

The American Bee Journal—Other Comments.

BY HON. EUGENE SECOR.

GEO. W. YORK, Chicago, Ill.

Dear Friend :—Well, you surprised us greatly by your change of dress. I didn't know the American Bee Journal had so many clothes. This is the fourth time it has changed its appearance since I became acquainted with it. It is a sign of prosperity to have a suit made to order before the old one becomes unpresentable. I am glad to think you can afford it—or, what amounts to the same thing, that you think you *can't* afford *not* to keep step with the march of Progress.

Now that you have discarded the old cover, I dare say to you that I never did just like it. That stake-and-rider fence in tangled growth of weeds and vines, with a straw hive *on the outside of the fence*, and so far from the house that the bees would need a telephone to notify the folks when ready to swarm, looked a little too antiquated for the World's Fair city. But I didn't have the courage to criticise it, because I thought a new suit out of the question during these hard times.

You have not only improved the outside of the American Bee Journal, but the whole make-up. You are using better paper, too. *Now* when you print a man's face his friends may be able to recognize the picture. In proof of this, just look again at the faces of our friends, the Dadants, in No. 1. They almost speak—so full of expression. These are good pictures—good men, too. (You will pardon this bit of praise when I tell you I'm a Frenchman—i. e., French descent.)

I don't see why the American Bee Journal—which has always been the firm and consistent friend of honest bee-culture, the fearless defender of its rights, and the outspoken enemy of fraud and adulteration—should not continue to be in the front rank of apicultural journalism. With an editorial corps composed of two doctors, a Gleaner, a Bee-Master and a *live woman*—besides the able correspondents who regularly contribute—you need not hesitate to push the claims of the "Old Reliable." Here's my ☞, and here's my dollar.

ABOUT OLD HONEY-EXTRACTORS.

The honey-extractor illustrated on page 2 (Fig. 3), reminds me of the one I made use of for several years in my experience as a bee-keeper. Mine was made almost exactly like that, except that it was all wood but the outside of the reel. The tub was a half barrel. It did good work, too. About the only objection that I had to it was that it took longer to start and stop than a geared machine. That was before the days of the 4-frame reversible.

THE FLAT HIVE-COVER GOOD ENOUGH.

I see a great deal is being said lately concerning the Higginsville hive-cover. I hope it is not true that certain manufacturers are pushing the claims of this cover for the sake of business. I can't for the life of me understand why the flat cover isn't just as good for all practical purposes, especially with an 8-frame hive. In all my experience I have never had a cover blown from a hive, whether made of one board or more. And I don't weigh them down with a 20-pound stone, either. I use a shade-board made of rough lumber, longer and wider than the cover, which keeps the latter from warping to any harmful degree. I don't now remember ever having one of these blown off.

The Higginsville cover may be all right, and if it is not more expensive than the flat style it is just as well for beginners to use it, but I would not advise any one to throw away their old fixtures every time something new comes out. You will need a shade-board with that, just the same, so there will be no expense saved on that score. Forest City, Iowa.

The Production of Comb Honey.

The second of a series of articles on this subject.

BY EMERSON T. ABBOTT.

You cannot get comb honey without bees, neither can you obtain the best quality of it without the right kind of bees, and this is equally true with regard to hives. One can secure just as much comb honey in an old hollow log, perhaps, as he can in the best modern hive, provided he has the log in sections so he can put them on one at a time, but this honey would not be in marketable shape. In other words, it would not be the kind of comb honey the people demand.

The hive we want is the one that will cost the least in proportion to its utility; last the longest, and give the most comb honey in the best marketable shape, with the least outlay of labor, etc. What kind of hive is this? Should it contain eight or ten frames? Should the joints be square or beveled? Should it be a hive fitted at the corners on the so-called dovetailed plan? or would it be better halved together? Should the bottom be fast or loose? Should it be one story and a half high, or should it be at least three? What kind of a super should it have? And what kind of an arrangement for holding the sections?

As to the number of frames which a hive should contain in order to secure the best results in the production of comb honey, I have a decided

PREFERENCE FOR THE EIGHT-FRAME HIVE.

In saying this I know I am going contrary to the opinion of some of our leading bee-keepers. Among them are those sterling, experienced, practical and successful honey-producers—the Dadants. They are so nearly right always, and I have such a high regard for their opinions, that I join issue with them this time with reluctance. It is true that we are not so far apart as we might be, as they believe in a hive big on the ground, and I believe in one big up in the air. I think, for all practical purposes that a modification of an eight-frame Langstroth hive cannot be improved upon in the production of comb honey. This hive furnishes plenty of room for the queen, enables the bees to conserve the heat to the best advantage, and does away with all of the trouble about getting the bees to enter the supers. It also does away with the necessity of contracting the brood-chamber at any time, and this saves the expense of division-boards and other traps for contracting. The fewer loose parts there are about a bee-hive, the better it is for me.

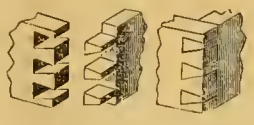
Having settled on the size of the hive, or rather of the the brood-chamber, the next question is how it should be made.

THREE METHODS OF PUTTING HIVES TOGETHER

have prevailed since I began to have any knowledge of apiculture. The corners of the old Simplicity hive were fitted together with a miter joint, but in the last few years there has been a great rage for the so-called "dovetailed" method of joining the corners. There were some serious objections to the mitered joints of the Simplicity hive, but as but few of them are now in use, it is not worth while to spend the time to name them.

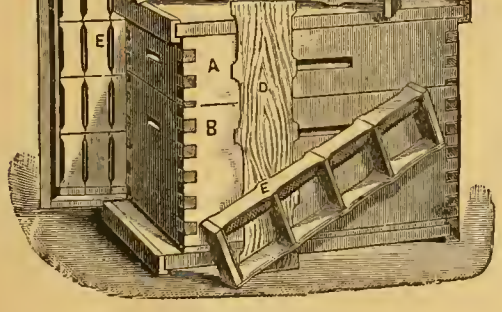
I have been led to wonder a great many times why the so-called dovetailed method has had such a run, as there seems to be some serious objections to it. In the first place, it has been wrongly named, for it is not dovetailed at all. If it really had a dovetailed joint, then there might be that much said in its favor, but it has not.

A dovetailed joint has a flaring tenon like a bird's tail, and a mortise into which the dovetail fits tightly. When such a joint is once in place it could not pull apart very well if it did not have a nail in it, as may be seen by examining the illustration.



A True Dovetailed Joint.

The joint used in this hive is, properly speaking, nothing but a mortise and tenon joint, and as such has but little to recommend it. There is a wide difference between this joint, as anyone can clearly see by referring again to the illustration. I am at a loss to know why it was ever called a dovetailed joint, for that is not the way a dove's tail is made. One of the funny things about it all is that the people who made these hives refer to the projections as "tenons" and never as dovetails. In my opinion it has nothing about it which renders it superior to the ordinary halved joint, as it adds neither strength nor lightness, and seems to have some objectionable features, as suggested above.



The "Dovetailed" Hive.

First, it is very much harder to set the hives up square, and one has to be very careful in nailing them, or when he has finished he will find them very much out of shape. Then, again, if one of the boards shrinks a little more than the other, it will be found hard to make the tenons fit the mortises; and, if drlven in, one of the boards is very apt to split. If it does not do so at the time of making them up, the continued pressure is apt to cause them to split later on. Then, if not kept well painted, these numerous cracks furnish an excellent opportunlty for the rain to beat in and rot out the joints in a short time. I fail to see where this joint has a single advantage over the halved joint, except in name.

Since not a single objection that I have offered can be made against the halved joint, I am at a loss to know why any one should prefer the other.

A HALVED JOINT

can be put together with very much less trouble, and there is but one crack for water to beat in.

Now I want to say before I go any further, that I am not making war on any manufacturer of hives, for they all make the so-called dovetailed hive, and any of them can make a halved joint, if they desire to do so. I am well aware that popular opinion will be against me, but I am also aware that we get into the habit of taking things for granted and of moving along in ruts. We follow fads as the women do fashions. Many times we are held back from expressing an opiuion by the idea that we will get a man's ill-will if we offer any objections to his wares, but to indulge this feeling often results in an injury to the industry we represent.

I may be permitted to say just here that it is my purpose to elimioate the personal idea entirely from my mind while I am writing these articles, It is not *persons*—all bee-keepers are my friends—but *things* that I am to discuss.

I wish these were all the objections I had to this hive, but they are not. Mr. Hutchinson says in his book: "Beveled joints, either at the corners of hives or between the stories, are being discarded so rapidly for the plain, square joint that it is almost a waste of space to condemn." This may be all right as to the corners, but I am not so sure of it as to the joints between the parts of the hive. I, for one, could never make up my mind to use a hive with a perfectly square joint between the parts, and there are a great many people scattered through this "wild and woolly West" who are inclined to agree with me.

I not only object to the square joints, but

THE HOFFMAN FRAMES

with their sharp edges and follower are equally as objectionable. Others may be able to content themselves with being forced to pull the frames apart every time they want to take one out, but for me, give me a hive in which the frames hang without touching each other, and out of which any one of them can be taken without first pulling—I say "pulling," advisedly—them apart. I do not object to self-spacing frames, or rather to having some kind of a device by which the frames can be accurately spaced, but I do object to the frames touching each other in order to accomplish this.

St. Joseph, Mo.

(To be continued.)

Rearing Brood on Sugar Syrup.

BY J. W. SOUTHWOOD.

On page 681 (1894), J. E. B. says:

"An old bee-keeper here tells me that bees cannot rear brood on sugar syrup, but must have honey to be fed on. Is this true? I have been unable to find anything touching this point in the bee books or papers."

The above questien is then answered as follows by Dr. Miller:

"I don't know that I can give a categorical answer, only that in hundreds of cases bees have wintered on sugar syrup and commenced breeding in the spring so far as yet heard from, just the same as if they had honey."

I think I am safe in saying I can give a positive answer that bees can rear brood on sugar syrup. In August, 1892, a neighbor proposed to give me the bees if I would help him cut a bee-tree he had found on his place—he to have the honey. I accepted, as they were real nice hybrids and a small tree. I transferred the combs containing brood and what other nice, straight comb there was, it being an after-swarm, and had but enough to fill five frames.

A few days afterward, another man said he had hived a swarm in a large nail-keg, that the bees had filled it full, and he did not know how to get it out, and said if I would help get the honey out I might have the bees. I did so, and got about 50 pounds of good honey in nice condition, and comb enough to fill six frames.

I moved the bees home, and fed each a little, as it was so

dry they could get nothing. I hoped that we would get rain to bring on the golden-rod and asters in September, but it continued getting drier till the tops of the weeds actually dried up. I found there was no other way but to feed, so I began feeding in September and continued, as I wanted to increase the number of bees. I fed nothing but sugar syrup—no honey mixed with it—and it was so dry they could get nothing of any account, as the other colonies were using up their stores, I found by examination.

The two colonies fed on sugar syrup began breeding, and so largely, too, that it took quite an amount of syrup to supply the brood. They wintered well on the summer stands and one was the third to swarm in the spring, and both did well—just as well, as far as I see, as if they had been fed on mixed honey and syrup, or even pure honey.

Monument City, Ind.

East Tennessee Honey-Resources and People.

BY H. F. COLEMAN.

I have carefully read the article written by Mr. Adrian Getaz, on the "Honey-Resources of East Tennessee," as published in the American Bee Journal of Dec. 6, 1894, and can't say now where we are drifting. As is well known, I was brought up in the mountains of East Tennessee, and have heretofore thought that it is one of the most lovely spots, taken as a whole, that is to be found on the face of the globe; but now that I have learned that a bee-keeper "who would" come here "must be willing to put up with lack of good society, good means of communication, and other refinements of civilized life"—as Mr. Getaz puts it—I find myself asking these questions: Is it possible that all I have thought and said about East Tennessee is a mistake? Have I only been dreaming, and is my dream, pleasant as it has been, about to vanish?

That "immense quantities of honey could be obtained" here is no question, for Mr. Getaz says so; but in this there is no solace. The crazing idea that I have been reared in a country void of good society and the refinements of civilized life is so mortifying that nothing but cowardice, or something else, prevents a suicide in these parts.

But, after all, there may be some mistake about this matter. Mr. Getaz may be mistaken; he may know absolutely nothing about the society and civilization of the people of the mountains of East Tennessee; and, again, he may be cranky—and I believe he does say something about being a crank—or something. And still again, he may think that by his tremendous denunciation of the mountains of East Tennessee he can deter good people who would come here to engage in bee-culture from so doing, and save to himself the little honey market at Knoxville—the place of his residence. So, taking all things together, I reckon I'll not suicide just now. Andrew Johnson, Landon C. Haynes, Bob Taylor, and other tolerably fair men, lived in the mountains of East Tennessee, and if the society and civilization here were good enough for these men, I don't guess I'll suicide because Mr. Getaz says they are not good enough for a bee-keeper!

It is true that our means of communication are not all that heart could wish. Our mail facilities are about as follows: At Sneedville—the place I call "home"—we have two daily mails and a number of weekly and tri-weekly mails; and other towns in this section have about the same. But of course these are not enough for bee-keepers! But I'll not suicide for that.

It is hard for me to think that the society and civilization of this country are such that bee-keepers could not locate in it, but Mr. Getaz has said it of the mountains of East Tennessee, and not only said it, but spread it out before the bee-keepers of the civilized world. I don't believe he knows what he has said, and especially *of what* he has said, and I want to make a wager with him. I want to bet him a fig that there are more than a dozen counties in the mountains of East Tennessee that he was never in in his life, and that he knows nothing about the society and morals of the citizens of these counties. And I'll bet him another fig that there is as much intelligence and refinement to the number of inhabitants in any of the mountain counties in East Tennessee, as in Knox county—the county of his residence. Sneedville, Tenn.

[Surely, Mr. Getaz has been misunderstood, or he did not say what he intended to say in the article which Mr. Coleman, and Mr. Webb (on another page), undertake to correct. I presume he referred to the society, civilization, etc., one would find in the canyons, such as are occupied by bee-keepers in California and other mountainous States, which are not usually favored with the refining influence of true womanhood in the home, and many other requisites of a civilized society. But *I'm* not going to give Mr. Getaz's explanation—he is of age, let him speak for himself.—EDITOR.]

Great Willow-Herb—Wintering Bees.

BY R. H. BALLINGER.

I send with this a letter from Mr. Frank Benton, of the Department of Agriculture at Washington, D. C., which is explanatory except the idea that I have mistaken this plant for *Apocynum cannabinum*, or Indian hemp. The facts are that the Indians from Neah Bay to Alaska have for years made threads and fish-nets from the *Epilobium angustifolium*. Judge Swan, of this city, sent to the Smithsonian Institute a fish-net made from this material by the Indians on Queen Charlotte's Island. The fibre is very strong and durable, and as a honey-plant it has few superiors.

The past season I discovered another valuable honey-plant growing wild in western Washington. (I mail you a few of the seeds.) I believe it is called *Spircea*, or sweet meadow-herb. It is a superior honey-plant also, yet for fall work I give the blue ribbon to sweet clover. I have it in bloom now 11 feet high (Oct. 30), flowers in abundance, and I counted to-day over 100 bees on it from two colonies.

WINTERING BEES IN WASHINOTON.

The better way to winter bees in this climate (we never have ice an inch thick, some winters none at all) is on the summer stands. I usually put a box over to keep away rain and dampness, leaving a small space for front entrance and egress. I have had fair success without any covering, and some losses, too, for want of it. Bees are such sticklers for home—their own "sweet home"—that much care is required and considerable damage occasioned by removals from their homes. When the home instinct is destroyed, the poor bee wanders from place to place, sometimes chilled, lost or killed by entering the wrong colony. Port Townsend, Wash.

[The following is the letter referred to in the first paragraph of Mr. Ballinger's article:—EDITOR.]

MR. R. H. BALLINGER, Port Townsend, Wash.

Dear Sir:—I have your letter, with samples of "Washington flax," and have referred the matter to my chief, Mr. L. O. Howard, who directs me to reply.

The plant mentioned is familiar to me, as it grows very commonly from North Carolina northward throughout the United States. It is known to botanists as *Epilobium angustifolium*, or Great Willow herb, and is a great honey-producing plant. You will find it figured in "Langstroth on the Honey-Bee," page 394, under the name *Epilobium spicatum*. *E. angustifolium* is the European name, and *E. spicatum* is the American name. The botanist of this department informs me that he is of the opinion that the two plants are identical. You will also find an excellent illustration of it on page 288, Vol. I, of "Bees and Bee-Keeping," by Frank Cheshire.

I wonder if you have not mistaken this for the plant from which Indians are known to make cord, and which is known as *Apocynum cannabinum*, or Indian hemp. I am very much obliged to you for the specimens, as well as seed.

Yours very truly,

FRANK BENTON, *Assistant Entomologist.*

An Interesting and Profitable Experience.

BY E. H. STURTEVANT.

I don't see how any bee-keeper can get along without the American Bee Journal, on account of the company it is to him. I have got to so depend upon it that I count each day until Friday comes. I do not think it ever once missed to be on time. The post-master turned up his nose because I made such a fuss about its being once mislaid, and I felt like punching that nose (carefully). Well, that day I had 238 hives full of extracting-combs, all dripping with honey, and the bees trying to get in, and some did, and made bad work tearing the combs to pieces. What to do I did not know, for it was getting late in the fall, and it seemed impossible to get them cleaned up. I had so much to do—had extracted 4,500 pounds, and taken off 3,000 of section honey, and had 4,000 of stores to take care of, with lots of cracks for the bees to

get in and raise particular h—— hard times, or free trade, or what some call "the blessings of a free country."

Well, the bees got filled so heavy they could not fly, and were about one inch deep on the floor, and as my suspender buttons got lost off behiud, I stepped into the bee-room to put some wire nails in place of the buttons (I am a single man), and the whole inch of bees marched up my stocking leg and commenced getting off on my calf, and on the leg of the pants.

You can imagine about how I felt when I went down to the post-office after the mail, and to have the post-master tell me the Bee Journal had not come, when I *knew* the others got theirs in the forenoon. I did not swear, but said to him, "I never in two years had the Bee Journal fail to be in the box on Friday with a *former* post-master!' Then his nose went up, and then was the time I felt so ugly, for I saw my Bee Journal lying on the distributing table. I called him to get it, and he said something about a great fuss and little thing, and I something about his nose—but I was really thinking about concentrated food for an enormous growth in calves, and so I went home and used the boracic acid freely. What? You're right, it *is* good! Worth the price of two bee-papers.

Well, when I got a little easy I went to looking over the Bee Journal, and what do you think I struck first? Why, that short cut to clean up extracting-combs, and I with 238 hives, or over 2,000 combs, all dripping and souring, and the bees robbing, and I unable to do the work of putting them on the hives to clean up without a great deal of trouble in many directions. So I spread the combs to seven in a hive, put out 60 of them 50 feet from the yard, as quickly as I could, and then I saw the show! By 4 o'clock every bee had left. I put in the 60, and prepared the 178, and put them out the next day, and they were cleaned up at half past 4 o'clock, and I was a happy man. So much for the Bee Journal.

The bees seemed to understand perfectly well what I was doing; took the protection to their industries with great kindness, which was a new revelation to me. But I did not have to change politics, as some other voters did along about those days.

I gave that copy of the Bee Journal away as a sample copy, and have forgotten who wrote the article. But I estimate it was worth to me more than one week's wages at $2.00 per day, in time saved, besides, never a bee offered to rob after that, nor to sting, and they all began to breed up, and but few threw out dead brood three weeks after. (I noticed only one hive.)

I extracted all unfinished sections, have 4,000 pounds of nice white extracted honey, and 1½ tons of nice section honey, over half of it the very finest I have ever seen in this region. Good judges call this the best honey-field in the State.

I had, spring count, 108 colonies—packed 125 in chaff, and put 28 into the cellar, making 163 in all, and well supplied. The white clover is thick, and like velvet, and 8 inches of snow to-day (Dec. 10). St. Ann, N. Y.

Honey-Resources and People of East Tennessee

BY WM. WEBB.

I find in the American Bee Journal for Dec. 6, 1894, a description of the "Honey-Resources of East Tennessee," which I claim is correct only in part; and I am very able to make my statements good, by bee-men of from 15 to 40 years' experience.

It is said in the article referred to, that in the latter part of May and in June we have honey-dew in abundance or not at all, and that this in good seasons is the main source of our surplus. Now I will say that at that time of the year is our main honey-flow, which comes from the poplar, the holly, the black gum, the linden, the locust, the chestnut and other trees and shrubs too numerous to mention. This explanation may do for Knox county and the vicinity of the city of Knoxville, but who of the readers of the Bee Journal would want to eat the filthy stuff that the writer of the article I mention says is "the main source of surplus" of East Tennessee? I admit that we have some honey-dew, but it is not my hope for a surplus; if it was, and that was my chance except sourwood, I would now quit bee-keeping. But it is not, and I am thankful for it, for we can produce as nice white honey in this mountainous part of East Tennessee as can be produced anywhere; but it takes attention to do so, on account of the dark yielding trees and the white yielders blooming so close, nearly at the same time. The sourwood blooms in July, after all the rest is over, and all bee-men that have seen sourwood honey know that is white.

The writer of the article I refer to, says that immense quantities of honey could be obtained in the mountains, where plenty of linden, tulip trees, sourwoods and wild flowers are yet to be found, but one who goes there must be willing to put up with lack of good society, good means of communication, and other refinements of civilized life. Now, friends, what do you think or that article? Does it describe the mountains of East Tennessee or the honey-resources? Does it not cast a slur on the good citizens, and bee-keepers, also?

It implies that we are not civilized. I might ask Mr. H. F. Coleman, of Hancock county, Are your people civilized over there? He would say, "Yes, sir." Have you got good schools, good churches, and good society? He would say, "Yes, sir." The same might be asked Mr. A.C.Babb, of Greene county, and his answer would be the same; and Sam Wilson, of Cocke county, would say "Yes, sir." I affirm that we have as good citizens and as good society as can be found at Knoxville; and we as mountain people have as good a place for producing honey as can be found in Tennessee, and far better than Mr. Getaz says his is.

We produce pure honey from the blossoms, and not honey-dew. Sutton, Tenn.

Report of the Northern Illinois Convention.

BY B. KENNEDY.

The Northern Illinois Bee-Keepers' Association met in Rockford, Dec. 18 add 19, 1894. There was a very fair attendance, the members reporting about 900 colonies and 20,000 pounds of honey for 1894. Mr. C. H. Stordock, of Durand, reported the largest yield, being about 97 pounds per colony, spring count.

Dr. C. C. Miller was present, which always insures a good meeting. The following questions were discussed:

PUTTING BEES OUT IN THE SPRING.

Is it best to put the colonies on the old stands when taking out of cellar? Most thought it best if possible, though some did not do it.

CONVINCING EXTRACTED-HONEY CUSTOMERS.

How can we convince customers that our extracted honey is pure? Have the honey well ripened, build up a good reputation for honesty, and explain to customers the kind of flowers it is gathered from. Several samples of extracted honey were shown, two being from Colorado.

EIGHT OR TEN FRAME HIVES?

Is the 8, or 10, frame Langstroth hive the best? About half use the 8, and the balance the 10 frame hive.

SOME ESSENTIALS IN BEE-CULTURE.

What is the most pressing want of bee-keepers to-day? Dr. Miller said "money."

What is the greatest essential to successful honey-production? Strong colonies and plenty of flowers.

SUPERSEDING QUEENS—SECTION FOUNDATION.

Is it advisable to supersede queens, or let the bees do it? Most of the members thought it best to let the bees attend to it, and let the bee-keeper watch them, and to supersede when the bees do not attend to it.

Which is better, thin or extra-thin foundation for sections? Thin.

How many use full sheets of foundation in sections? Only one—Dr. Miller uses full sheets.

WIRING BROOD-FRAMES—SECTION-HOLDERS.

How many wire brood-frames? And is it best? H. W. Lee thought it was not necessary, while others thought that it was.

What is the best section-holder? Dr. Miller thought the T super with a follower and wedge the best.

DAMPENING SECTIONS FOR FOLDING.

What is the best method of dampening sections when they break in putting together? Some put them into the cellar a day or two before using. Dr. Miller uses a teakettle about half full of water, and takes a bunch of 500 sections and pours the water in the V groove, doing the whole in a minute or two.

FEEDING BACK DARK HONEY—CONTRACTION.

If you have a quantity of dark honey, is it a good plan to feed it back? If so, when? Yes, in the spring, but not in the fall.

Do you practice contraction of the brood-nest? If so,

when? Only one practices it; others had done so, but do not now, as they do not like it.

THE BEGINNER—HONEY-PLANTS.

What would you advise a man to do first, who has decided to go into the bee-business? Look up a good location.

The subject of honey-plants was discussed. Alsike clover was thought profitable for honey, and also for hay. Sweet clover was considered very good for honey.

DIVISION-BOARD—FOUNDATION FASTENER.

Where a division-board is used in the hive, will the bees work as well in the sections over an open space? Not so well.

What is the best method of fastening foundation in sections? Some liked the Parker foundation fastener. Dr. Miller prefers the "Daisy."

HIVING SWARMS—SPRAYING FRUIT.

Is it best to put the new swarm on the old stand? Some thought it was. Dr. Miller thought a good plan was to put the new swarm on the old stand, and leave the old one beside it for about five days, then remove to new location.

An essay on spraying fruit, and its connection with bee-keeping, was read by Mr. A. J. Sweezey, of Guilford. A general discussion followed, in which it was reported that several fruit-men had sprayed while in bloom, and killed the bees. One case was given about a man in Ogle county, who sprayed his plum trees while in bloom, and killed 30 colonies of bees. It seems that a good many do not know the time to spray—that it is *after the blossoms have fallen.*

New Milford, Ill. B. KENNEDY, *Sec.*

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Spreading Brood in the Spring.

Would you advise spreading the brood in the spring, to increase brood-rearing, if it is done cautiously, in a locality where they have to "hustle," to be up to the standard in time for the honey-flow?

ANSWER.—I'm afraid about how "cautiously" you'd do it. I certainly wouldn't do it if the queen kept as many cells filled as the bees could fully cover.

Snow in Front of the Hives.

Is it necessary to keep the snow away from the front of the hives during winter, to keep the bees from smothering? Or will it do no harm if left there? W. E. H.

Fairfield, Pa.

ANSWER.—A little snow will do no harm, so long as it remains loose and open, but if it thaws, packs, and freezes, then it may prevent the bees getting the air they need. A hive may be buried ten feet deep in snow without any danger of smothering, for the snow will melt away around the hive, leaving an open space; but if the hive remains too long buried—perhaps more than a week or two—then it works mischief, for the bees get warm, uneasy, commence breeding, and are in bad condition by spring. It's a safe plan to keep snow cleared away from the entrance.

"Rusty" Combs—Sowing Buckwheat—How Many Colonies in One Place?

1. About the middle of November I took surplus honey off of my hives, and examined the bees slightly, as it was too cool to disturb them any more than I was obliged to do. Four out of five of the brood-combs were covered with a kind of red moth or dust—something like rust on wheat or oats, only not so red, but more flesh color or purple. I thought that it had a bad smell, but probably it was my imagination. On one hive the surplus honey had some on, too. I could blow some of it off, but not nearly all of it. The honey tastes all right. The four colonies affected this way did not gather much honey until fall. Do you know what is the matter with them? And what must I do with them if they are not right?

2. I have two acres of rented land, about one-half of it being too wet for early planting of anything. It is only about 30 rods from my apiary. Would you advise me to sow buckwheat on all that is dry enough in the spring? (By the time it would ripen, the other land would do to cultivate.) Harvest the first (if there were anything to harvest), and then sow all of the two acres to it? The land is a corner by itself, and wet.

3. About how many colonies would you want to keep in this locality? There are no forests in sight, some willows, long branches and ditches, and not much waste land. Of course we have pastures, lanes and fence-corners for them to work on. J. R. S.

State Line, Ind.

ANSWERS.—1. I cannot tell anything about it. Can any of our readers help us out?

2. I have some doubt whether you would gain anything by sowing in spring. Plants have their proper season for blooming, and you can't crowd them much out of their regular course. Besides, if you should get buckwheat to bloom during the flow of white honey, the white honey might be damaged more than all you would gain.

3. That's a tough question. Much depends upon the number of bees kept within a radius of two or three miles. If such bees are not plenty, it's possible 100 colonies might do well for you, but likely 75 would do better.

Drones from a Mismated Queen.

Are the drones of a mismated queen pure?

J. S. W.

ANSWER.—Some say yes, some say no. I doubt if you or I could tell any difference, and for all practical purposes I should be satisfied with such drones, if indeed there is any difference at all.

Colonies of Pretty Good Strength in Spring.

I wish to try some bees, and want to know what is the number of frames bees should be between to be considered strong and in good condition after coming through the winter? Berryville, Va. J. R. C. L.

ANSWER.—If you find bees clustered in four or five of the spaces between the frames, they are of pretty good strength.

Frames of Honey, or Syrup and Extracted Honey, for Stimulative Feeding.

Will feeding frames of honey give as good results for stimulative purposes as sugar syrup or extracted honey fed from a feeder? NEBRASKA.

ANSWER.—There is some difference of opinion. I have been somewhat inclined to the opinion that when there was plenty of honey in the hives the queens were always likely to keep as large a brood-nest supplied as the bees could cover. Still, some think it makes a difference whether honey is coming into the hive, and there may be something in it. A frame of honey would not seem as much like stores coming in from the field as would stores given in a feeder. But if you will scratch some of the cappings, then it will have all the advantages of the feeder.

Weak Colonies Destroyed by Moth-Worms.

I have lost several colonies of bees by moth-worms, and it seems that as soon as they get in there is no hopes. They tear the combs and eat the bees. The larva is in a cocoon, and sticks to the wood, cutting grooves in it, sometimes cutting holes through the top-bars; it is sometimes a mass of cocoons between the top-bars and division-board, making it hard to get the latter off. How will I keep the moth-millers out, and avoid losing the colony? W. R. W.

Bellevue, Del.

ANSWER.—If I were on a tree, high enough so I knew you couldn't reach me with a stone, I'd say I don't believe the millers ever destroyed a colony for you. I've had hives containing just such things as you tell about, but the fault didn't lie with the millers in the hive, but with the two-legged Miller

outside. A colony becomes queenless, or weak in some way, gets discouraged, and then the wax-moth comes in, and only hurries up things a little in a colony that would go to the dogs anyhow. That being the case, the thing to do is to keep colonies strong by seeing that they never become queenless. If a colony by any means becomes very weak, examination will generally show that it is queenless, or perhaps, worse still, that it has a bad queen, or a lot of laying workers. Very often the best thing is to break it up, giving bees and combs to other colonies.

Sometimes, however, you may have a colony that seems to be so lacking in ambition that they will allow the worms to get the start of them, and in that case you would better change their queen for one of better stock. Italians are much better than blacks for keeping worms cleared out.

Basswood Sprouts from Old Stumps.

If I cut basswood sprouts from the side of old stumps (where they have started out), and set them out, will they live and grow? Or will I have to dig those from the ground, which have roots? MICHIGAN.

ANSWER.—I have some little trees that were started by cutting sprouts away from the stumps, but as I didn't do the work myself, I'm not sure how much root was with them. I think, however, that no great amount of root is needed. If there is but little root, cut away the top to correspond, for a great bushy top makes too heavy a draft on a small amount of root, and both may die.

Questions About Alsike Clover.

1. If I seed a certain piece of land to Alsike clover, year after year, will the last crop be as good as the first, provided the season is the same?

2. Does Alsike clover benefit land any?

MICHIGAN.

ANSWERS.—1. Not unless you add something to the soil to make up for what is taken from it.

2. All the clovers draw material from the air, and in that way are beneficial; besides, the roots loosen up the ground, especially with such strong growing kinds as sweet clover, which, when the roots decay, leave the ground full of little canals running downward.

Planting Basswood in Nebraska.

There are no basswood trees in this part of the country. Do you think they would grow here if planted? Would you advise me to get 4 to 8 inch trees, or some that are 4 to 6 feet high? J. C. K.

Glenwood, Nebr.

ANSWER.—I think basswood trees will grow in any part of Nebraska where other trees will grow, and I certainly should give them a fair trial. As to size, if I were setting out an apple orchard, I would prefer trees three feet high to those ten feet high, at the same price. Simply because with the smaller trees I would be more likely to get roots proportioned to the size of the tree. I have been told that the same rule does not hold with basswoods, that large trees do as well or better than small ones. Perhaps they do, if special pains be taken to preserve all the roots. But the matter of price would cut some figure in the case. The larger trees will cost much more, and the transportation charges will be very much less on little trees. So you see you must take all these things into consideration. On the whole, I think you may run less risk not to have very large trees.

Canadian Beedom.

Conducted by "BEE-MASTER."

Introduction of the Movable-Frame Hive Into Canada.

In his excellent essay on "Bee-Keeping in Canada," contributed by Mr. McKnight to the last meeting of the North American Bee-Keepers' Association, and published in the American Bee Journal of Dec. 20, 1894, the following paragraph occurs:

"When the movable-frame first came into use in Canada I am unable to say; nor do I know who introduced it. Both it and the extractor were known of and their advantages understood, some years before either came into general use. D. A. Jones was among the first to extensively employ them and was unquestionably the first to demonstrate the honey-producing capabilities of this country. In 1879 he placed on exhibition, at the Toronto Industrial Fair, 10 tons of honey, the product of his own apiary."

I can state a few particulars of interest in regard to the early history of the movable-frame hive in Canada, though I am unable to say when it first came into use, nor who introduced it. But in the Canada Farmer of April 15, 1864, an illustrated article appeared under the heading, "A Good Bee-Hive." Shortly after the appearance of this article, I had an opportunity of seeing the hive in actual use on the premises of the late James Lesslie, Esq., of Eglinton, near Toronto. This hive was made by Mr. P. A. Scott, an ingenious mechanic living in Yorkville, then a suburb of Toronto, but now part of the city. I think Mr. Lesslie furnished the patterns for it from an English book on bee-keeping. It stood on a frame-work a foot and a half or so above the ground, with an interior compartment of glass, and an outer case of wood, having a lid hinged from behind. It was not adapted to the climate of Canada, being too unwieldy to be carried into the cellar, and not sufficiently protected for out-door wintering. Besides these objections, it was too costly for common use.

The following fall, Messrs. J. H. Thomas & Bros. exhibited their "Movable-Comb Observing Bee-Hive" at the Provincial Exhibition. It was a much more practical hive than Mr. Scott's, and had many excellent features. The movable-frame idea was copied from the Langstroth hive, but it was much deeper than the Langstroth, and was constructed on the principle of allowing the bees to carry their stores from the entrance and at the same time form a natural cluster without coming into contact with the bottom-board. The comb-frame bearings were bevelled to a sharp edge to prevent the bees from glueing the frames fast. The flat ends of the frames projected about an inch beyond the sharp bevelled edges, enabling the bee-keepers to get a hold of them without interfering with the bees. Outside the ends of the frames there were revolving bands pivoted on cleats outside the hive, which facilitated the removal of the frames, and served as upper alighting-boards, giving the bees a short route to the honey-boxes during the storing season. There was also a swinging and adjustable bottom-board pivoted on screws at the front of the hive, enabling dead bees to be cleaned out in spring without taking out the frames.

This was the first movable-frame hive I used, and on adopting it in the spring of 1865, I soon transferred all my box-hive colonies into it, and found great satisfaction in its use as compared with the box-hive. Mr. J. H. Thomas, the inventor of this hive, was a thorough bee-keeper, and did much to promote the pursuit in Canadian beedom before D. A. Jones had begun to keep bees at all. His brother, H. M., was an enthusiast in regard to Alsike clover, and did much to disseminate its culture as a honey-producing plant, both in Canada and the United States. Both the Messrs. Thomas removed ultimately to the United States, J. H. became a magnetic doctor, settled in Rochester, N. Y., and was present at the North American Bee-Keepers' convention in Rochester, some years ago, where I last met him. I do not know in what part of the Union H. M. settled, but perhaps he will report himself among other "lost sheep" referred to in the last number of the American Bee Journal.

Shortly after the introduction of the Thomas hive, Mr. S. H. Mitchell, of St. Mary's, Ont., produced a hive, with frames on the Langstroth principle but deeper even than the Thomas hive, and V-shaped at the bottom, to cause bees that died during the winter to fall entirely outside the hive, so as not to befoul the interior. Mr. Mitchell's hive was used by many western Ontario bee-keepers.

I fancy the Jones hive was the next to become widely used in Canada. At the present time a great variety of hives is here. Though the Langstroth hive, as to dimensions, is the standard in the United States, I think it can hardly be regarded as the standard in Canada, for hives varying in depth from the Heddon to the Jones, which, I think, is the deepest now in use, may be found in the apiaries of Canadian beedom.

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GEORGE W. YORK,
EDITOR.
Assisted by the following Department Editors:
DR. C. C. MILLER - - - "QUESTIONS AND ANSWERS."
MRS. JENNIE ATCHLEY - - - "THE SUNNY SOUTHLAND."
"GLEANER" - - - - - "AMONG THE BEE-PAPERS."
"BEE-MASTER" - - - - - "CANADIAN BEEDOM."
DR. F. L. PEIRO - - - - - "DOCTOR'S HINTS."

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Editorial Comments.

A Beautiful Baby Girl came to the home of the editor of the American Bee Journal last Friday evening—Jan. 18; but it staid only a few hours. Of course there are sorrowing hearts, for its mother and I had hoped so much that when the baby came it might stay with us, and be a great joy and blessing to our home. But, although 'twas hard to give up, we bow submissively to the will of Him "who giveth, and who taketh away."

Mrs. York is doing fully as well as could be expected under the circumstances, I am thankful to be able to say.

Father Langstroth, and anything concerning him and his welfare, are ever of interest to bee-keepers. So I give to the readers of the Bee Journal the latest news I have received. His daughter, Mrs. Anna L. Cowan, writes me in a letter, as follows:

DAYTON, O., Jan. 12, 1895.

MR. GEORGE W. YORK, Chicago, Ill.

Dear Sir:—Your letter to my father enclosing the check for $5.30 (from Mr. Cronkleton) was duly received. Many thanks to you for your kindness in the matter. I write to Mr. Cronkleton by this mail.

This extreme cold weather affects my father very unpleasantly. Although our rooms are warm, his blood is so thin that it is hard for him to keep comfortable.

I join him in wishing you a very happy New Year.

Respectfully, MRS. ANNA L. COWAN.

Making a Live Bee-Paper.—Mr. N. Levering, in the bee-department of the California Cultivator, gives some excellent hints on "How to make a live bee-paper." Just read this—it's Mr. L.'s prescription:

First subscribe for it and have your neighbors subscribe, then write for it; give your experience, and ask for information, and thus call out others and get what they know, and put into circulation useful facts that will not only benefit you, but benefit and interest others. Remember that the press is the great medium through which flows the progressive stream of knowledge that wells up its sparkling drops in all lands, from which all may drink and be wise, prosperous and happy. We ask the bee-keeping fraternity to open their pent-up thoughts and pour out a stream of sweetness that will inundate error and make this journal a beacon light to all who will travel the highway to prosperity. We are glad to see our friends waking up to their interest in this matter.

Mr. Levering has the correct idea in the above, particularly in the first sentence. If all bee-keepers would take his advice, and apply it to the American Bee Journal, they'd soon see the "livest" bee-paper ever thought of. But according to some folks, the Bee Journal is pretty much alive as it is. Yet it can be made much better, by *all* working unitedly to that end.

Convention Reports, as well as anything else of real interest to bee-keepers, the American Bee Journal is always pleased to publish. But, friends, please do *condense* what was said, or what you have to say. Actually, one convention secretary recently sent in a report in which about half the pages contained nothing but the *questions* discussed. Not a word of what was said about them! What possible good is it to publish a long list of mere questions? About what is wanted is something like Mr. Kennedy has given on page 53—simply the questions and the *results* of the discussions, or the real information brought out.

I wish that all who write for publication would try to crowd as much as possible into as small a space as possible, for if they don't do so I'll have to, as there is not room in the Bee Journal these days for very much spread-eagle correspondence. I want to give every one a chance to have his or her "say," provided you have some real information to give. I *do* want every subscriber to feel free to send in any helpful ideas or kinks that he or she knows, for by the many contributing a little each, there is bound to be a grand total of something good for all.

Mrs. Harrison asked the Prairie Farmer, of Chicago, these questions some time ago:

Are bee-keepers retrograding? Have they gone back a century? If not, why was it necessary for the Prairie Farmer to print directions for "packing straw skeps for removal?" If there is a bee-keeper on this continent using straw skeps he must have been like Rip Van Winkle—asleep for 20 years.

I noticed the editor of the paper referred to didn't answer the questions asked. I imagine he thought it better to say as little as possible when Mrs. Harrison was "after him." The Prairie Farmer is a grand good farm paper, and when Mr. Chas. Dadant or Mrs. Harrison write anything for its columns on bees, it can be relied upon as being first-clast information. But, generally speaking, unless farm papers copy something direct from the best bee-papers, their bee-columns are more than likely to contain matter somewhat aged, and often totally misleading.

Not in the Bee-Supply Business.—The publishers of the American Bee Journal wish that its readers would remember that they are *not* in the bee-supply business. So *don't* send to them for a catalogue, for they have none. Please do this: Order your bee-supplies from the dealers who advertise in the American Bee Journal. Send to them for catalogues, and then order what you want. Were it not for the advertising patronage which the Bee Journal enjoys, it could not possibly be published for the extremely low price of $1.00 a year. So you see it is also to *your* advantage to encourage its advertisers, by buying your supplies of them, and kindly say you saw their advertisement in the American Bee Journal.

Indignant Emm Dee!—Just read the following, and see what one of Mrs. Atchley's indignant admirers has to say about her and Mr. A.:

There, now; I just think it a shame! I supposed those Southern bee-keepers more chivalrous. I don't doubt but that Mr. Atchley is a good, sensible man, as men go, but land sakes alive! The idea of leaving out that very enterprising, judicious little woman—*Mrs.* Atchley—she whose valuable suggestions on bee-culture we all admire and profit by so greatly—she, forsooth, is left clear out of the official directory of the South Texas Bee-Keepers' Association—simply because she is a *woman*, I suppose. I'm just indignant, that's what I am! EMM DEE.

Study Up about bee-keeping in the winter time, and thus get ready for another summer's campaign. Plan ahead, and thus use your head—your brains. It will take wise heads to get ahead of drouth or other obstacles that the bee-keeper often has to meet. But *do your best* to win success, and then you'll not have anything to regret on that score. You can't change the seasons, but you may be able to plan and work so as to do better in the future than you have done in the past.

A Honey Exchange was talked of being established—or a propostion looking toward it, was to be presented—at the meeting of the Los Angeles County, Calif., Bee-Keepers' Association held in Los Angeles, Jan. 12. Bee-keepers outside of that "county of the angels" will be interested to know the outcome of the proposed scheme. Maybe Pres. Geo. W. Brodbeck will tell the readers of the American Bee Journal all about it soon.

The Vermont Bee-Keepers' Convention meets in 20th annual session at Middlebury, Vt., Jan. 30 and 31. Among the profitable subjects to be discussed are the following:

How to rear queens in upper stories, and the best time to rear good ones—A. E. Manum.
How to cleanse wax, and make foundation.—R. H. Holmes.
What I think of house-apiaries, and how to work with one.—H. H. Burgh.
What has been done at the Experiment Station—C. W. Fisher, D. D. Howe and O. J. Lowrey.
In view of the rapid strides of the disease known as "bee-paralysis," is it safe to buy queens of any and every one who sees fit to advertise them for sale?—J. E. Crane.
How shall we grade our comb honey?
How to manage out-apiaries.

The announcement which I received says that "the meeting is to be held in the 'heart' of the 'honey section,'" and so a good attendance is expected. The following will also be of interest to those who anticipate going:

The C. V. R. R. Co. grants the "Convention rates" of 2 cents per mile for 33 miles or less, with a maximum rate of $1.00 and a minimum rate of 15 cents, 34 miles or over, fare one way. Tickets good going Jan. 29 and 30, and good to return Jan. 30, 31, and Feb. 1, between the following named places only, to Middlebury: Malone and Ticonderoga, N. Y., Richford, Enosburgh Falls, St. Albans, Milton, Cambridge Junction, Jericho, White River Junction, Roxbury, Montpelier, Waterbury, Burlington, Vergennes, Leicester Junction, Shoreham, Brandon and Rutland, Vt.

Mr. H. W. Scott, of Barre, Vt., is the Secretary. Address him for any further information that may be desired.

Sympathy.—I want to thank the writer of the followiug, for his kindly sympathy, and hope that if he ever meets "Gleauer" he will "make him take it back."

MR. GEORGE W. YORK, Chicago, Ill.
Dear Sir:—When an anonymous writer like "Gleaner" calls you the "we-est" man in the fraternity, I want you to understand you have my sympathy. You are neither small nor "wee;" and you just tell him so. C. C. MILLER, JR.
Chicago, Ill., Jan. 17.

The Northern Illinois Convention, as will be learned by referring to page 53, met in Rockford, Dec. 18 and 19. The officers elected for the ensuing year are these:

President—Leroy Highbarger, of Leaf River. Vice-President—S. H. Herrick, of Rockford. Secretary—B. Kennedy, of New Milford. Treasurer—O. J. Cummings, of Guilford.

Among the Bee-Papers

Conducted by "GLEANER."

DISCUSSION ON THE FIVE-BANDED BEES.

The Progressive Bee-Keeper for January is mainly devoted to the discussion of the golden or five-banded bees. S. E. Miller says that after having the yellow bees predominate in numbers, he finds they fall behind leathered-colored bees as gatherers.

E. T. Flanagan thinks the furore for five bands is passing away; that nothing can compete with three-banders for extracted honey, but they don't cap comb honey white enough.

J. D. Givens likes the goldens; "store just as much honey as any others, and are the best comb-builders I have."

W. Z. Hutchinson says: "I believe that, as a rule, the dark, leather-colored bees are the better, but I also believe that the brighter colored bees may be just as good workers as their darker sisters," and "that there are some strains of this variety that cannot be excelled by the dark Italians." Has had yellow bees from various sources, all good-natured except one colony, and that was very crosss.

G. M. Doolittle gives an interesting account of the origin of his strain of yellow bees, and refutes the idea that Cyprian blood had anything to do with it, by saying that in 1880 he had "good four-banded worker-bees, drones having the abdomen fully one-half yellow, and queens entirely yellow to the tip," and that was a year before any Cyprians were in this country. By careful selection he has developed a strain of best working qualities, nearly all yellow. He says, "these yellow bees outstripped anything in the way of imported or hybrid bees I had during the past year, 1894, and gave comb honey of the most snowy whiteness.....I find them very variable as to temper, some of them being nearly as harmless as flies, while some colonies are quite resentful when opening their hives after they have become well supplied with honey.....I have not found them as good winterers when left on the summer stands, as are some of the darker strains from imported stock, or hybrids, but with cellar-wintering, which the most of us here at the North adopt, I see very little if any difference in favor of either."

E. W. Moore says: "I have only one good point in favor of the five-banded bees, and that is, if you can pull them through the winter, they build up as fast as the three-banded, and are far ahead of the black bee in brood and bees by clover harvest; but just as soon as honey begins to come in freely, they seem to lose all their former activity."

J. W. Rouse says that in the very poor season of 1894, "I had several colonies that made a surplus.....and this surplus all came from my best-marked five-banded bees. Two seasons ago, some of my best-marked five-banded bees gave 40 pounds of surplus, where I did not get a pound from my three-banded bees. As to gentleness, I have some five-banded bees now in my yard that I can open their hives and blow on them, and it only makes them stir a little."

DRONES FROM LAYING WORKERS AND UNFECUNDATED QUEENS.

Willie Atchley reports in Gleanings an experiment to decide as to the value of dronesfrom workers and unfecundated queens. Queens to be mated were put on the prairie five miles away from other bees, the only drones present being from laying workers. He says: "Our experiment queens would mate and lay as well as any queens, so far as we could see, in worker-cells, and nearly all the eggs would produce drones."

This conflicts with the views expressed by good authorities. If, however, a sufficient number of actual experiments so decide, old theories must be set aside for those established by actual practice. But should it be fully established that the drones of laying workers are worthless, that by no means proves that drones of unfecundated queens are worthless.

ELECTROPOISE AND THE WATER-FINDING SWITCH.

A. I. Root started a crusade against Electropoise, and was for some time alone in it, as respectable papers advertised it with testimonials from ministers and others. Now he's swinging his hat because the scientific journal, Electricity, comes out strongly in opposing Electropoise as a humbug of the basest kind, selling for $25 a worthless thing that costs 42 cents.

A. I. also give fits to the divining rod, or switch, for finding water.

BEE-KEEPING IN SWEDEN.

The Canadian Bee Journal has a letter from Johan Forssell, secretary Bee-Association, Sweden, in which he says his apiary is situated in 59½° north latitude. Bee-keeping is general up to 62°, and occasional bee-keepers are found up to the polar circle. "In spite of the northern situation, the long winters and very cold temperature, the bees here winter on their summer stands." Might be a good plan for those who have trouble wintering, to try some of the Swedish stock.

More Kind Testimonials.—Since the last issue I have received quite a number expressions of appreciation of the American Bee Journal, among them the following:

The sterling publication, the old American Bee Journal, comes out for 1895 in a brand new dress, and enlarged to twice its former dimensions. It enters on its 35th volume, and is the oldest bee-paper in America—being established "befoh de wah," and that was a long time ago.—The Daily Press, Riverside, Calif.

The staunchest prohibition newspaper in all the West—The Lever, published here in Chicago—said this on its farm page:

The American Bee Journal, of this city, makes a New Year's bow in a new form and pretty dress. It is a great improvement over the old antiquated form. The paper should be a weekly visitor in every bee-keeper's home.

Patronize Our Advertisers.—I wish that readers of the American Bee Journal would, whenever possible, patronize those who advertise in its columns. Also remember, when writing to an advertiser, to say you saw the advertisement in the Bee Journal. This will greatly help us and those who patronize the advertising columns of the Bee Journal. It is earnestly endeavored to admit only responsible firms, as the publishers of the Bee Journal will not knowingly encourage frauds or swindlers.

The Sunny Southland.

CONDUCTED BY

MRS. JENNIE ATCHLEY, BEEVILLE, TEX.

Report of the South Texas Bee-Convention.

The South Texas bee-keepers met at the apiary of Mrs. Jennie Atchley, in Beeville, Tex., on Dec. 27 and 28, 1894. As the bee-keepers were late in gathering on the first day, the meeting was not called to order until 1 p.m., and as we had the worst weather on the two days of our meeting that we have had this winter, we could not hold the meeting out-of-doors, as was announced, but as Mrs. Atchley is always alive to the interest of bee-keepers, she was not long in having her factory put in order for the occasion, and seats and accommodations made for all.

The meeting was called to order by Mrs. Atchley, and she made a short speech as follows:

ADDRESS BY MRS. ATCHLEY.

Dear Friends, Brother and Sister Bee-Keepers:

It is with the greatest of pleasure that I greet you this afternoon, and it makes me feel happy to see so many smiling bee-keepers here, and especially those from distant States. It is with the view of building up the bee-keeping interest of southwest Texas that I have called this meeting, and now that you have come, I wish you all to know that I am very glad indeed to meet you. I wish you one and all to make, and feel, yourselves at home while here. My house, factory and apiary, also the whole premises, are at your command; everything is free to you—look at everything on the place.

I now take the greatest of pleasure in introducing to you Rev. W. K. Marshall, D. D., of Marshall, Tex. He is the "king-bee" of our great State, having brought the first Italian queen to Texas more than 40 years ago, and is the oldest bee-keeper in this State, now in his 86th year. I have appointed him to preside over this meeting, as he is the President of the Texas State Bee-Keepers' Association.

I also take great pleasure in introducing to you Mr. W. R. Graham, of Greenville, Tex. He is the Vice-President of the State Association, and is known as the "comb honey man of Texas."

If there is anything that you want, please let some of our family know it, and we will see that you get it, if possible. You see those books over there, they are bee-papers, and sent here for you to take home with you; they are free—take some home with you to give to your bee-keeping neighbors. The nearest pile is the American Bee Journal, and the other is Gleanings in Bee-Culture. The first I will take your subscription for, and give you free a 50-cent bee-book as a premium; it is a weekly journal, and all for the small sum of $1.00 per year. Gleanings is a semi-monthly, also $1.00 per year.

I also have the "A B C of Bee-Culture," published by A. I. Root, one of the best apiarists in the world, and this book gives bee-keeping from the start clear through to successful management of an apiary of 100 or more colonies. I think these books and papers will be all the bee-literature you will need to make bee-keeping a success. The "A B C" is $1.25.

You will please excuse me for taking your time talking of bee-books, etc., as this meeting was called principally for beginners, and some are here from a distance who wish to know what kind of bee-literature to get, and where to get it.

Now, as I must see that you get something to eat while you are here, I wish to be excused, that I may look after the kitchen. Again, I wish to express my gratitude in meeting so many pleasant faces.

JENNIE ATCHLEY.

A song was then sung, and music on the organ by Miss Hettie Thetford. At the close of the song, "What a Friend We Have in Jesus," all arose while prayer was offered by Dr. Marshall. Then the names of some 80 bee-keepers were enrolled.

Dr. W. K. Marshall then delivered an address as follows:

ADDRESS DELIVERED BY DR. MARSHALL.

I am glad to see so many ladies present. I am told that bees won't sting them. Bee-keeping is an industry that is adapted to ladies. I have often told at our bee-meetings how I first began bee-keeping, and as the majority here never heard it, I will repeat the story that you may see or learn how superstitious people used to be about bees. People in those days thought it was bad luck to sell bees; this I found out when I went one day to one of my best friends to buy two colonies. Said he: "I cannot sell my bees, it is bad luck, and I would soon lose all I have, and then I would be out of bees and honey."

I said to him that I *must* have some bees some way, and asked him how I should get them. He said to me: "I will tell you how to do. The next time it turns a little cool, you go to my house and get two colonies of bees, and leave a $5.00 gold piece on the bench where you get the bees, and that will be all right."

Well, that was enough for me, so it was not long before I went over, and on my way I met my friend, and he wanted to know where I was going, and I told him I was going out to steal some bees. He motioned to me to go ahead. On my arrival where the bees were, I slipped cautiously around so that I thought no one would see me. I had told my friend that I did not believe in stealing, and that I had been taught that it was wrong to steal. He said it was not wrong to steal bees, and I must confess that I did not feel much as if I was stealing, but I selected my bees and slipped away as quietly as I could well do, and left the money on the bench.

Quite awhile after that I met my friend again, and I was anxious to know what had become of the money, and my friend asked me if I saw any one while I was stealing the bees, and I told him that I saw a woman. "Well," said he, "I'll bet you that woman got that money." I was satisfied after that.

I will tell you of my first Italian queen, which was more than 40 years ago, and she cost me $24. After I got her I did not know how to introduce her, as I had nothing but box-hives. Right here I wish to tell you how nearly I came to inventing a movable frame, and after I saw that Langstroth had succeeded in making the movable combs, I was astonished that I had been such a fool, as I had top-bars, and never thought of going any further. You see I had my bees, or the combs, so that I could take them out of the hives by taking a knife and cutting down the sides of the hives.

Well, I will now come back to introducing my queen. I cut out the combs, and carried them by the top-bars away out from the bee-yard, and shook the bees all off the combs, and they all flew back to the hive, or all the old ones did, and the queen did not go, as she was in full laying condition and could not fly very well, and, as most of the old bees went back home I had a pretty good swarm, and I set the combs back, and in a day or two I turned the queen loose, and she flew away. Oh, how sad I was to see my $24 fly off like a bird; but soon she came back and went into the hive, and I tell you that I was proud indeed.

In due time the bees began to hatch out, and I called to Mrs. Marshall to come and see my beautiful bees; but she seemed not to be as much interested in them as I was, and did not give me much encouragement. I wrote to Judge Andrews, of McKinney, that I had an Italian queen, and that her bees were hatching out, and he rode 140 miles on horseback to see my queen. I am now satisfied that my first Italian queen was not a pure one, but she was a good queen, and I prized her highly because she cost me high.

In conclusion I want to tell you how I beat a bee-man at his own game at the Dallas Fair in October, 1893. I do this to try to interest you while the committee is getting the question list ready.

Well, W. R. Graham sent me a fine colony of bees as a present, and I thought I would take it to the Fair and see if I could not take a premium, and Mr. Graham took a colony of bees, too, and we of course were competitors. We happened to get a good set of judges—Mrs. Jennie Atchley, J. D. Givens, and A. G. Branshaw—and they all were "up" with the marking of bees and queens, and they decided at once that my queen, also my bees, were the best, and I got the premium, and beat Mr. Graham at his own game!

Now, I want to tell you how I beat myself. Soon after my queen took the premium, a man stepped up and offered me $20 for the queen that took the premium, and I told him I would not take it, but I would take $25 for both queen and bees, and he would not give it, and went away, and I did not get to sell her at all. I often thought after that how greedy we sometimes are, and do not know a good thing when we see it. I "got left," and I have always been ready since then to advise a person to take a good thing when it is offered.

W. K. MARSHALL.

(To be continued.)

So Long as the bees are not diseased, and can find no work to do abroad, their winter nap had better be continued.—*Dr. Miller.*

Convention Notices.

NEW YORK.—The annual meeting of the Ontario Co., N Y., Bee-Keepers' Association will be held in Canandaigua, N. Y., Jan. 25 and 26, 1895. Come early. Everyone come.
Bellona, N. Y. RUTH E. TAYLOR, Sec.

MINNESOTA.—The regular semi-annual meeting of the Southern Minnesota Bee-Keepers' Association will be held on the first Monday in May, 1895, at LaCrescent, Minn. All bee-keepers invited. E. C. CORNWELL, Sec.
Winona, Minn.

PENNSYLVANIA.—The Venango County Bee-Keepers' Association of northwestern Pennsylvania will hold their 2nd annual meeting in the City Hall at Franklin, Pa., on Jan. 28, 1895, at 1 o'clock p.m. All interested send for program. C. S. Pizer, Sec.
Franklin, Pa.

WISCONSIN.—The 11th annual meeting of the Wisconsin State Bee-Keepers' Association will be held in the Capitol, at Madison, Feb. 6 and 7, 1895. All bee-keepers are requested to attend, whether they receive a formal notice or not. H. LATHROP, Rec. Sec.
Browntown, Wis.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association on March 16, 1895, at Goodno's Hall, in Bronson, Bourbon Co., Kans. It is the annual meeting, and all members are requested to be present, and all bee-keepers are cordially invited. J. C. BALCH, Sec.
Bronson, Kans.

CALIFORNIA.—The California State Bee-Keepers' Association will hold its fourth annual meeting on Tuesday and Wednesday, February 5 and 6, 1895, at the Chamber of Commerce, corner of 4th and Broadway, Los Angeles. Programmes will be ready Jan. 15.
PROF. A. J. COOK, Pres.
J. H. MARTIN, Sec., Bloomington, Calif.

VERMONT.—The next annual convention of the Vermont Bee-Keepers' Association will be held in Middlebury, Vt., on Jan. 30 and 31, 1895. Programs will be prepared and mailed later. Let every Vermont bee-keeper begin NOW to prepare to attend, and all those who can reach Middlebury, whether you live in Vermont or not, we want you to come.
Barre, Vt. H. W. SCOTT, Sec.

Ricker National Nursery Co.—We are in receipt of the 36-page wholesale catalogue and price-list of the Elgin Nurseries, Elgin, Ills. This catalogue not only contains extremely low prices on evergreens, fruit and forest trees, vines, shrubs and roses, but contains an illustrated treatise on evergreens, entitled, "How to grow evergreens for protection." The sample order No. 1—200 assorted evergreens, 7 varieties, including Colorado Blue Spruce (Picea Pungens)—they send to any part of the United States, express prepaid, for $2.00, or one-half of the lot for $1.00. Their nurseries received highest award and medal at the World's Fair, Chicago. Send for their catalogue—it is free. See their advertisemeut in another column.

☞ "The American Bee Journal is almost indispensable in bee-culture."—H. F. Keeler, of Iowa, Dec. 28, 1894.

Wants or Exchanges.

This department is only for your "Wants" or bona-fide "Exchanges," and such will be inserted here **at 10 cents a line** for each time, when specially ordered into this department. Exchanges for cash or for price-lists, or notices offering articles for sale, will not be inserted here—such belong in the regular advertising columns, at regular rates.

WANTED—To exchange, Pure St. Bernard Pups, bred from registered stock. Will exchange for any thing useful. Would like a portrait lens. SCOTT BRILLHART,
3A2t Millwood, Knox Co., Ohio.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Dec. 27.—Up to the present the sales on honey have met with our expectations. We have received considerably more honey than we figured on handling, owing to the short crop report, and we think the early shippers reaped the benefit. However, we are now getting the average price, viz.: Fancy, 15c.; white, No. 1, 14@13c. Extracted, 6@7c.
Beeswax, 28@29c. J. A. L.

CHICAGO, ILL., Jan. 3.—As usual, the volume of trade in honey is small at this season. But our stock is not heavy, and soon as this month is past we expect a demand that will clean out all present and prospective offerings. Comb sells at 14c. for good white; fancy brings 15c.; dark grades, 8@12c. Extracted white, 6@7c.; dark, 5@6c.
Beeswax, 27@28c. R. A. B. & Co.

NEW YORK, N. Y., Dec. 20.—The market for comb and extracted honey is good, and the supply equals the demand. Fancy clover and buckwheat sells best; off grades are not quite as salable; and 2-pound sections are little called for. We quote as follows: 1-pound fancy clover, 13@14c.; 2-pound, 12½@13c.; 1-pound white, 12@12½c.; 2-pound, 12c.; 1-pound fair, 10@11c.; 2-pound, 10@11c.; 1-pound buckwheat, 10@11c.; 2-pound, 9@10c. Extracted, clover and basswood, 6@6½c.; buckwheat, 5@5½c.; Southern, 50@60c. per gallon. Beeswax, scarce and in good demand at 29@30c. C. I. & B.

CINCINNATI, O., Jan. 7.— Demand for honey is very quiet since the holidays, and prices are unchanged. Comb honey brings 14@16c. for best white, and extracted 4@7c.
Beeswax is in good demand at 23@28c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, Mo., Jan. 7.—The demand for both comb and extracted is light. Supply good. We quote: No. 1 white comb, 1-lbs., 14@15c.: No. 2 white, 12@13c.; No. 1 amber, 13c.; No. 2 amber, 10@11c. Extracted, white, 6@6½c.; amber, 5@5½c.; dark, 4½c.
Beeswax, 22@25c. C. C. C. & Co.

BUFFALO, N. Y., Dec. 17.—The demand for honey is very quiet. We quote: Fancy, 13@14c.; choice, 11@12c.; others from 8@10c. Liberal amount of stock in market. The prospects are that the demand will be very light until after the holidays. Extracted is moving very slowly at 5@7c. B. & Co.

NEW YORK, N. Y., Dec. 31.—The demand for comb honey has been very light of late and has now almost dwindled down to nothing. The supply has been accumulating and there is a large stock on the market. In order to move it in round lots, it will be necessary to make liberal concessions from ruling quotations. We quote: Fancy white, 1-lbs., 13c.; off grades, 11c.; buckwheat, 9c. We have nothing new to report in extracted. It is moving off slow and plenty of stock on the market, with more arriving. Beeswax is steady and finds ready sale on arrival at 30c. per pound. H. B. & S.

RUDY'S PILE SUPPOSITORY

Is guaranteed to cure Piles and Constipation, or money refunded. 50 cents per box. Send two stamps for circular and free Sample to MARTIN RUDY, Registered Pharmacist, Lancaster, Pa. NO POSTALS ANSWERED. For sale by all first-class druggists everywhere. Peter Van Schaack & Sons, Robt. Stevenson & Co., Morrison, Plummer & Co., and Lord, Owen & Co., Wholesale Agents, Chicago, Ills.
Pease mention the Bee Journal. Nov15

Good Honey-Sellers ought to be needed now, and the little 32-page pamphlet, "Honey as Food and Medicine," has for years proven itself valuable in making repeated sales of honey. Its distribution will *create a demand* for the honey first, and then the bee-keeper can follow it up and supply that demand. Send to us for a sample copy, only 5 cents; 10 copies, postpaid, 35 cents; 50 copies, $1.25; or 100 copies $2.00. Try 50 or 100 copies, and prove their ability to aid you in disposing of your honey at a good price.

☞ **See A B C** offer on page 46.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.
J. A. LAMON, 43 South Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.
F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 28 & 30 West Broadway.
CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.
FRANCIS H. LEGGETT & Co., 128 Franklin St.

Kansas City, Mo.
CLEMONS-MASON COM. CO., 423 Walnut St.

Albany, N. Y.
H. R. WRIGHT, 326 & 328 Broadway.

Buffalo, N. Y.
BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.
CHAS. DADANT & SON.

Cincinnati, Ohio.
C. F. MUTH & SON, cor. Freeman & Central avs.

Iowa Seed Co.—We are in receipt of the Catalogue of the Iowa Seed Co., of Des Moines, one of the finest seed catalogues of the year. It is a book of practical and complete information to the seed-planter, and is gotten up neatly and concisely in the highest style of the printers' and lithographers' art. Any of our readers can obtain a copy by merely sending a postal card to the company and mentioning the American Bee Journal. Alfalfa clover seed is offered by this firm.

California

If you care to know of its Fruits, Flowers, Climate or Resources, send for a Sample Copy of California's Favorite Paper—

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The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.40 per annum. Sample Copy Free.

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The Bee-Keepers' Guide:

—OR—

Manual of the Apiary.

By Prof A. J. Cook—for over 20 years a professor in the Michigan Agricultural College. This book in not only instructive and helpful as a GUIDE in bee-keeping, but is also interesting and thoroughly practical and scientific. It contains a full description of the Anatomy and Physiology of Bees. 460 pages, bound in cloth.
Price, postpaid, $1.25; or clubbed with the Bee Journal for one year—both for only $1.75; or given free as a premium for sending us 3 New Subscribers to the Bee Journal at $1 each

G. W. YORK & CO., 56 5th Ave., Chicago, Ill

Strawberry and Raspberry Plants.

Best **New** and **Old** varieties. **Best grown Plants.** Catalogue **Free.** With instructions for their culture. Send for it **Now.** Mention this paper. Address, **E. J. SCOFIELD,**
3A13t P. O. Box 113, HANOVER, WIS.

HONEY FOR SALE.

I have about 3000 lbs. of Basswood Honey for sale at 7 cents per lb., in 60-lb. cans, on board cars. I will guarantee it strictly pure.
2A **John Wagner, Buena Vista, Ill.**

CONSTITUTION

OF THE

North American Bee-Keepers' Association

Adopted at St. Joseph, Mo., 1894.

ARTICLE I.—NAME.

This organization shall be known as "The North American Bee-Keepers' Association," and shall include in its territory all of the United States and Canada.

ARTICLE II.—OBJECT.

Its object shall be to promote the general interests of the pursuit of bee-culture throughout North America.

ARTICLE III.—MEMBERSHIP.

1. Any person interested in apiculture may become a Life Member upon the payment to the Secretary of the sum of ten dollars.

2. Any person interested in apiculture may become an Annual Member upon the payment to the Secretary of one dollar. Ladies interested in apiculture may become members free.

3. No member shall be entitled to the floor for more than five minutes in any discussion, without the consent of the Association, nor a second time, unless by the consent of the President, or a majority of the members present.

4. Any person may become an Honorary Member by receiving a majority vote at any regular meeting, after having been approved by the Executive Committee.

ARTICLE IV.—OFFICERS.

1. The officers of this Association shall consist of a President, a Vice-President, a Secretary and a Treasurer, who shall be elected by a majority ballot at each annual meeting, for the calendar year following; and their duties shall be the same as usually devolve upon such officers. They shall constitute the Executive Committee.

2. The Executive Committee of this Association shall cause the Constitution to be printed in appropriate form, and every person joining the Association shall be entitled to a copy of the same.

3. The Executive Committee shall select subjects for discussion, and the same shall be published with the call for the next annual meeting. It shall also provide badges for all members.

4. The Executive Committee shall also provide a place of meeting for the annual convention, and see that all necessary arrangements are made to carry out the demands of this Constitution.

5. The Secretary shall be paid a salary of $25.00 a year, at each annual meeting.

6. An Auditing Committee of three shall be appointed by the President, on convening of each annual session, whose duty it shall be to audit any or all accounts so ordered by the Association.

ARTICLE V.—MEETINGS.

The annual meeting of this Association shall be held at such place as shall be agreed upon at the previous annual meeting. Ten members shall constitute a quorum for the transaction of business, but a less number may engage in discussion, and adjourn until some future day.

ARTICLE VI.—VACANCIES IN OFFICE.

Vacancies in office, by death, resignation, or otherwise, shall be filled by the Executive Committee, until the next annual meeting.

ARTICLE VII.—DEFENSE COMMITTEE.

A Defense Committee of seven shall be appointed for the purpose of considering the applications of members for defense from unjust lawsuits by those who are prejudiced against the pursuit. This committee shall be the officers annually elected by the National Bee-Keepers' Union.

ARTICLE VIII.—AMENDMENTS.

This Constitution may be amended at any annual meeting by a two-thirds vote of all the members present.

EVERGREENS FRUIT AND FOREST TREES

Grape Vines, Small Fruits, Shrubs and Roses. Sample Order No 1: 20 evergreens, seven varieties, including Colorado Blue Spruce, (Picea Pungens), sent to any address in the United States, express prepaid, for $2; one-half of above $1. 36 page wholesale catalogue and "How to grow evergreens" Free. Received highest award at the World's Fair. Large discounts for early orders. Address, Elgin National Nursery Co., Elgin, Ill.

4A8t *Mention the American Bee Journal.*

THE KEYSTONE DEHORNER

Cuts clean on all sides—does not crush. The most humane, rapid and durable knife made, fully warranted. Highest World's Fair Award. Descriptive Circulars Free.

A. C. BROSIUS, Cochranville, Pa.

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ALL STEEL OR WOOD STEEL LINED.

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Send 6c. for Illus. Catalog. Circulars Free.

GEO. H. STAHL, 114 to 122 S. 6th St., Quincy, Ill.

24E13t *Mention the American Bee Journal.*

Dovetailed Hives,

Sections, Extractors, Smokers, and everything a Bee-Keeper wants.—**Honest Goods at Close, Honest Prices.** 60 p. catalog free.

J. M. Jenkins, Wetumpka, Ala.

2E10t *Mention the American Bee Journal.*

NEW 68 PAGE CATALOGUE AND GUIDE to Poultry Raisers for 1895. Contains over 130 fine illustrations showing a photo of the largest hennery in the west. Gives best plans for poultry houses, sure remedies and recipes for all diseases, also valuable information on the kitchen and flower garden sent for only 10 cents. John Bauscher, Jr., P. O. Box 5 Freeport, Ill.

24E7t *Mention the American Bee Journal.*

BEGINNERS.

Beginners should have a copy of the Amateur Bee-Keeper, a 70-page book by Prof. J. W. Rouse. Price 25 cents; if sent by mail, 28c. The little book and the Progressive Bee-Keeper (a live, progressive 28-page monthly journal) one year, 65c. Address any first-class dealer, or

LEAHY MFG. CO., Higginsville, Mo.

Mention the American Bee Journal.

Langstroth ON THE Honey-Bee

—REVISED BY THE DADANTS—

This magnificent classic in bee-literature has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, and is substantially bound in cloth.

Price, postpaid, $1.40; or clubbed with the Bee Journal for one year—both for $2.15; or the book free as a premium for sending us 4 New Subscribers to the Bee Journal at $1 each

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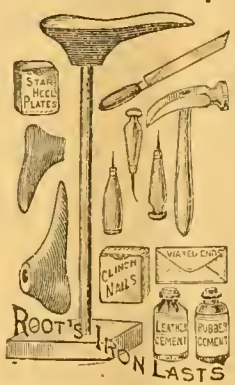

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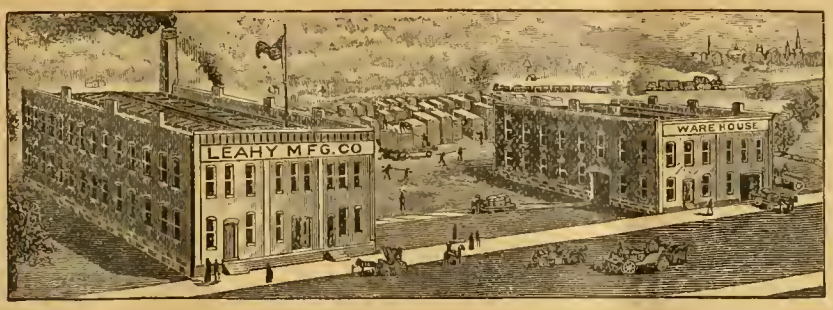
☞ "I expect to be a subscriber to the American Bee Journal as long as I live. I don't see how any one who has bees can do without it."—Noah Miller, of Iowa, Dec. 22, 1894.



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Doctor's Hints

By DR. PEIRO, Chicago, Ill.

Frozen Flesh.

I know of nothing better to thaw a frozen ear, nose or fingers than to wrap them up in a rag that has been well sprinkled with turpentine. But snow or cold water does excellently, and is more easily obtained. Queer how frozen water cures frozen flesh—but it is so.

Double Action of Salt.

Another funny thing in Nature is, that salt put on ice prevents it melting so fast; yet salt put on an icy sidewalk melts it soon. Now, how do you account for this double action?

Better Fat than Thin.

Why, you silly boy! Poke-root berries are not the part that makes fat folks thin—it is the *root* that is used. And I would advise you to not even try that. It can do you much harm. Better be fat and healthy than thin and sickly.

Freckles Indicate Health.

"Freckles!" Why, don't you know that is the very best evidence of health you can have? Well, it is. If I were very sickly, I'd give a quarter for every freckle they could put on my face, and would snap my finger at every boy who called me "freckle nose."

Squirrel Bites.

Well, I expect you squeezed your "Bunny" a little too tight, and he bit you. Squirrels are apt to resent too pressing familiarity. But his bite is no worse than any other. The idea that it causes fits is simply ridiculous!

Tight Shoes and Corns.

Corns? They are usually the result of tight or ill-fitting shoes. They press so hard over a spot of skin that it cannot grow natural, but is condensed into a callous. That's a corn. Dig out the hard core so as to leave a hole instead, and you are relieved. But the same shoe will occasion another corn, in time.

Peach Seeds for Coughs.

Peach pits are good for whooping-cough, and other kinds of coughs, too. The most violent poison can be distilled from them, called "hydrocyanic acid." But a seed eaten every hour or so is perfectly harmless.

Baked Apples for Dyspepsia.

Bessie, tell grandma that if she will live one week on baked apples only—nothing else—her dyspepsia will give her little trouble. I'd almost like to have the 'pepsia just to get the baked apples!

Buckwheat vs. Alfalfa Honey.

Well, Billy, there are curious kinds of honey. The kind the bees store from buckwheat *is* apt to give you a sour stomach, but if I you can get alfalfa honey, stored from a kind of clover—you just sail in. It's licking good!

Croupy Parrots.

So your "Dandy" has the croup, you think? Well, dearie, I'd like to tell you what to do, but I'm sorry I am not a bird doctor. Try cuttle-fish bone; it is said to be good for such troubles.

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(By Newman), containing 160 pages, and over 130 illustrations. We expect to give away the whole edition, and want you to help us scatter them, by getting New Subscribers to the "Bee Journal." We will give a copy of the book *free* to the New Subscriber who sends us $1.00 for the "Bee Journal" from **Jan. 1, 1895, to Jan. 1, 1896.**

Now if *you* will get the one new name and his or her $1.00, and send it to us we will *also* mail *you* your choice of *one* of the following list for your Premium:

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Turkeys for Market— " "
Capons and Caponizing— " "
Foul Brood Treatment—by Cheshire.
12 copies Honey as food and Medicine.
Amateur Bee-Keeper—by Rouse.
Convention Hand-Book.
Green's How to Propagate and Grow Fruit
" How We Made the Old Farm Pay.
" Garden and Orchard.
" Six books on Fruit Culture.
Foul Brood—by Dr. Howard.
Bee-Keeping for Profit—by Tinker.
Ropp's Commercial Calculator No. 1,

If you will send us **Two New Subscribers** at the rate given above ($1.00 each), we will send you your choice of one of the following list, as your premium and also mail to each of the two new names a copy of the 160-page bee-book:

Doolittle's "Scientific Queen-Rearing" (paper)
Dr. Miller's "Year Among the Bees."
Hutchinson's "Advanced Bee-Culture."
Pierce's "Wintering Problem."
Binder for "Bee Journal."
Dzierzon's "Rational Bee-Keeping" (paper)
Alley's "30 Years Among the Bees."
"People's Atlas of the World."
Ropp's "Commercial Calculator" No. 2.
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Now start out at once and see what you can do. You should be able to get many new subscribers on the above offer, without very much trouble.

Sample Copies of the "Bee Journal" mailed free.

GEORGE W. YORK & CO.

56 Fifth Avenue, **CHICAGO, ILLS.**

General Items.

"Nothing" Makes a Difference.

On page 807 (1894) I am made to tell a very good size story; that is, that some Rhode Island bee-keepers obtained 800 pounds of honey from 4 colonies. This is more than the bee-pasturage of Rhode Island will produce, and would rank equally with some of those large yields in the South that we read about; besides it is a greater story than any one would credit as the truth. It should read: "Keep from 2 to 40 colonies;" of course the reader will notice that nothing (0) has been left out, and in this case nothing makes a difference, for it brings the average down considerably per colony. W. A. Greene, who has an apiary of about 25 colonies near the center of the city of Providence, obtained over 700 pounds; while Samuel Lewis, from 42 colonies, in the suburbs, had over 800 pounds.

Providence, R. I. W. G. GARTSIDE.

When to Move to the South.

On page 715 (1894) Mr. Eastman asks when is the best time to go to Texas from the Northern climate (Illinois). In reply Mrs. Atchley says: "I am at a loss to tell you when is the best time to come, but if I were coming I would start whenever I got ready—it will not make any difference that I know of."

But I would say it makes a big difference if a man from this Northern State moves to Texas in June or July. It would be death or sickness as a result of the change in the climate. I speak from experience. In 1864 my regiment (6th Minn. Vol. Inf.) was here in Minnesota, when we received orders to go South, and on June 2 we left Fort Snelling, Minn., with 1,000 men, all strong and healthy, and arrived at Helena, Ark., on June 26. After two months they said only 80 had not been on the sick list; and in November only 300 men were left for guard duty, and the balance of 700 were either dead or in the hospital boat at Jefferson barracks, Missouri, or had returned to Wisconsin. A good many of the soldiers died before they reached so far north, that they could breathe the fresh and healthy air.

The 300 men left were sent to St. Louis on guard duty, and in January, 1865, we were sent to New Orleans and across the Gulf of Mexico to Mobile and to Montgomery, Ala., the first of April. Then we were all healthy. The last part of July we left Montgomery for home, and only a few of the boys were sick with the climate fever. More than half of the soldiers that died in the South died with the climate fever. From this you will see that if a man goes from this Northern country to the Gulf of Mexico, he must go in January or February, and then when the sun comes up higher each day, he would be used to the climate. If people from the North go down to the Gulf in June or July—if they don't die they have to stand the climate fever. If a man were to leave Texas in January or February, and come up here, do you think he could stand 30 or 40 degrees below zero? I say no.

I am the only bee-keeper in Swift county, Minn.; out on the prairie, six miles from any woods, except 10 acres of young timber on my land, consisting of oak, poplar, ash, box-elder and basswood. Fifteen years ago the timber was all cut down so it is all young timber. The basswood blooms very freely every year. There is no bee-keeper west of me, and none nearer than about 25 miles east of me, in Kandiyohi county. The clover doesn't grow here, except the mammoth red clover and sweet clover. The only honey-flow I have is in the fall, from golden-rod and asters. The best honey-flow used to be cut off by frost in October.

I had 10 colonies, spring count, and increased to 18. I have 7 hives full of comb and honey that I left out-doors, and will keep them so until spring, and see what I can do with them then. A. P. CARLSON.

Carlson, Minn., Dec. 17.

Very Cold Weather.

We have had very cold weather here since Christmas. There is six inches of snow on the ground. This keeps the bees close at home. JOSEPH E. SHAVER.

Friedens, Va., Jan. 3.

Gets a Little Surplus.

There is nothiug much for the bees here, although I manage to get a little surplus. Our main trees here for pollen are elm, cottonwood, willow, pepperwood and fruit trees. Outside of this we have no special trees. The basswood, which I read so much about, I would like very much to get.

I think the American Bee Journal is one of the greatest papers I ever read. I would rather miss my dinner than a single copy of it. J. M. JEFFCOAT.

Pike, Tex., Jan. 3.

The Eastern Iowa Convention.

The 6th annual convention of the Eastern Iowa Bee-Keepers Association met at Anamosa, Iowa, Dec. 26 and 27, 1894. Secretary Frank Coverdale being absent, H. F. Keeler was elected Secretary *pro tem.*

Membership was solicited without fee, and 24 persons became members by subscribing to the constitution and by-laws.

A number of interesting questions were discussed.

Officers were elected as follows: President—F. M. Merritt, of Jackson Co. Vice-Presidents—T. O. Hines, of Jones Co.; Chas. Hammons, of Clinton Co.; D. C. Wilson, of Linn Co.; J. C. Merritt, of Jackson Co.; A. Y. Hanna, of Dubuque Co. Secretary—

H. F. Keeler, of Anamosa. Assistant Secretary—J. A. Jansen, of Cedar Rapids.

Mr. O. Hines was given an extended vote of thanks for the essay and poem read.

The 7th annual meeting will be held at Anamosa, Iowa, early in December, 1895. The Secretary was directed to fix the date, and publish the proper notice.

H. F. KEELER, *Sec. pro tem.*

Anamosa, Iowa.

Results of the Past Season.

From 5 colonies, spring count, I obtained 361 pounds of comb honey, in one-pound sections. I increased them to 11 colonies, and they are all in chaff hives on the summer stands, with 3¼ inches of chaff all around, and a good chaff cushion on top. They had flights Dec. 16 and 21, and they are wintering well now, as far as I can see. I think my location here is very good. We have lots of clover, basswood and golden-rod, and there are no bees within 12 miles of mine. A. H. CHESLEY.

Jackson, N. H.

Driest Season Ever Known, Etc.

I am almost ashamed to report the past season, as it was the driest ever known. I got 150 pounds of comb honey from 30 colonies and one swarm, and fed 225 pounds of granulated sugar. Our sources here for surplus honey are basswood, white clover, Alsike clover, buckbush bloom, and several other varieties.

I visited Rocky Ford, Colo., in October, in the interest of the honey-bee, and found a good honey country, and lots of bee-men, too. I saw several carloads of honey stacked up ready to ship—as fine honey as could be produced from alfalfa and Rocky Mountain honey-plant. Everything is raised there by irrigation.

McFall, Mo., Dec. 25. J. E. ENYART.

Had Some Nice Comb Honey.

We got 22 pounds of nice comb honey from one colony of bees, and none from the other hive. A queen from Texas filled an 8-frame hive with bees, swarmed, and filled the second hive with winter stores.

It would take too much space to tell how well we like the American Bee Journal. Success, and a happy year to its publishers.

MRS. JULIA CANNON.

Wabash, Ind., Jan. 2.

An Experience the Past Season.

As it is only fair to give as well as take, and as I find I enjoy reading of other peoples' success, I will give a little of my experience.

Last spring (1894) opened finely, with the bees in good condition, and they gathered pollen from soft maple, and everything looked well. So I took the winter cases off and piled them up about the first of May. Then came a hard frost which cut the corn which was nicely up, and with the corn all that a bee valued went also.

We soon discovered that white clover had been destroyed by the dronth of 1893, so it was from hand to mouth with the bees, until basswood bloomed. Then they began to store honey in the upper story, but most of them very slowly. Then the flow was over, and not a section capped, so I left them on, hoping that raspberry or blackberry, and buckwheat or smartweed, would supply the needed honey to complete the unfinished sections. But I was doomed to disappointment, for instead of completing they depleted the sections, and I got nothing.

But here is the strange part of the story: The year before I sent and got two queens. I introduced them successfully in the fall of 1893; one turned up missing before spring opened, and the other was a good one, with "blue blood," for she filled the hive with bees; they worked when no other colony was doing anything, they never loafed, and stored some 40 pounds of section honey, and went into winter quarters strong; besides, I took one or two frames from them, and gave to weak colonies.

I have other colonies of Italians—some hybrids, and some blacks—but this one colony stored more than all the rest put together. So I concluded there must be something in the stock. Not one of my colonies swarmed, as I suppose they knew there was nothing to swarm on.

May the American Bee Journal live forever! E. B. ELLIS.

Cooksville, Ill., Jan. 1.

A Good Report from a Beginner.

I started in the spring of 1894 with 5 colonies, and increased to 11. I sold one colony for $3.50. My 10 colonies gathered 374 pounds of honey, and I sold about 350 pounds at 14 cents in the home market. I thought that better than 16 cents and ship it, pay expenses, and run risks. If any of the readers of the American Bee Journal know of a better way of marketing honey, I would like to hear from them through the Bee Journal.

There is no one within about two miles that has as many bees as I have, and there is plenty of basswood and golden-rod, maple and wild flowers. I sow some buckwheat, and have some Alsike clover. My bees are in single-walled hives, and are packed with corn-fodder on the south, west and north. J. T. WHITE.

Smiley, Ohio, Dec. 29.

Old Bee Journals.—We have quite a number of old copies of the American Bee Journal, extending back perphaps 10 years. We will send these out at *one cent a copy*, all to be different dates, and back of Jan. 1, 1894. Remember they are *odd* numbers, and you must let us select them. We cannot furnish them in regular order, that is, one or two months' numbers without a break, but will mail you as many single or odd copies as you may wish, upon receipt of the number of cents you want to invest in them. They will be fine reading for the long winter evenings, and many a single copy is worth a whole years' subscription. Better send for ten or more copies, as a sample order. Only a cent a copy, *back* of Jan. 1, 1894.

☞ "I am dropping several papers, but cannot give up the American Bee Journal. I think you have made great improvements in it the past year; and if the past is a prophecy of the future, we may look for still more."—S. H. Herrick, of Illinois, Dec. 28, 1894.

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Bees by the Pound, $1.00; Nuclei, $1.00 a Frame; Full Colonies, $6.00, with Untested Queens.

It is now proven that Bees shipped North in April and May pay well, and strong 2-frame Nuclei and Queens will build up and give a honey crop. This is one of my SPECIALTIES. safe arrival and satisfaction guaranteed.

I am now preparing to be ready to fill all orders for BEES and QUEENS **promptly**, and if you contemplate buying any Bees or Queens it will be to your interest to write me for Prices on Large Lots and to the Trade. Let me book your orders.

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Globe Bee Veil

By Mail for One Dollar.

Five cross-bars are rivited in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through.

It is easily put together and folds compactly in a case, 1x6x7 inches, the whole weighing but 5 ounces. It can be worn over an ordinary hat; fits any head; does not obstruct the vision, and can be worn to bed without discomfort. It is a boon to any one whom flies bother, mosquitos bite, or bees sting.

☞ This Veil we club with the Bee Journal for one year—both for $1.75; or give free as a Premium for sending us 3 New Subscribers to the Bee Journal at $1.00 each.

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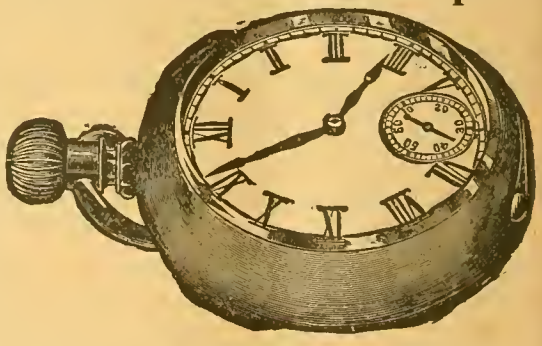

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Contributed Articles.

On Important Apiarian Subjects.

Handling Bees in Cold Weather.

BY J. A. GREEN.

I hope that all the readers of the American Bee Journal are of that class who are always up with their work, and have everything in the way of work with the bees finished before they have ceased to fly. I am fraid, though, that there are many apiaries in which cold weather finds a great deal to be done. I must confess that it has often been so in mine, and especially in the past two or three years, when other work has claimed a share of my attention.

Working with bees is not a pleasant task at such a time. Some bees are particularly vindictive in cool weather, and one is apt to get many stings in handling even the gentlest, for they are much more liable at this time to make their way under the clothing, where they will sting when pinched.

When such work becomes necessary much trouble may be saved by going about it properly. Perhaps you find the bees of a colony scattered through two or three stories of combs. The bee-escape—one of the greatest of labor-saving inventions

J. A. Green. Ottawa, Ill.

for the apiary—is useless so late in the season. Smoke is of little avail. If you attempt to shake or brush the bees down in front of the hive, they either lie there until torpid with cold, or rise into the air, to alight on the surrounding objects, most of them upon the operator. Those which alight on the hives or other cold objects usually become chilled and never get back into their hive. Those which alight on the bee-keeper, immediately proceed to seek shelter from the cold air by crawling under his clothing, into his pockets, or wherever they can find an opening.

Instead of trying to brush the bees out into the open air, as it were, pile two or three empty supers or bottomless hives over the one that has the bees in it. You will find that you can shake or brush the bees into the deep funnel thus formed,

W. A. Pryal. North Temescal, Calif.—See page 73.

with little or no loss, or trouble from their taking wing. It is best to hold the frame the bees are on by the end, and lower it a little way into the shaft formed by the empty hives, before shaking or brushing them off. Then every bee that is dislodged, falls on the top of the brood-frames where it is safe, and from which it will very seldom take wing.

If the weather is too cold to attempt to do anything with the bees out-of-doors, and there is something that really ought to be done, do not consider it necessary to wait for warmer weather. Take the bees into the house, where you can have it as warm as you choose. I have had considerable experience handling bees in this way. I once filled a large order, in the middle of the wintor, for bees that were to be made into medicine. They were shaken and brushed from the combs into wire-cloth cages in which they were shipped, just as we used to ship bees by the pound in the summer. The room was kept comfortably warm, though I found the bees were less inclined to fly when it was not over 70°. For the sake of convenience, all the windows were darkened but one, before which the work was done. The few bees that took wing collected on this window and could easily have been returned to the hive.

With the temperature at about 60°, and not too much light, scarcely any bees would leave the combs, especially if

the cover was quietly removed and the bees left uncovered but undisturbed for a short time before attempting to handle them. In some respects it was really less trouble handling the bees under these circumstances than out-of-doors in warm weather. Queens could be found easily and any desired manipulations might have been made.

I shipped at this timo over 100 pounds of bees. The colonies were taken from an out-door temperature close to zero, and on being opened immediately in the warm room would exhibit a liveliness that would be rather perplexing to one who advocated that bees hibernate, or even fall into a "semi-dormant" condition in winter. Ten pounds of bees confined in a cage, in an agitated condition, will generate an astonishing amount of heat, much more, it seems to me, than an equal weight of any other form of animal life with which I am acquainted.

It might be supposed that handling at such a time would be injurious to bees that it was desired to preserve, but I feel sure that if properly done it does not hurt them in the least.

Some of the colonies brought in for shipment proved on examination to be in such good codition that they were returned to the yard. All wintered nicely and were among the best colonies the following season.

Much of my experience in handling bees in winter was obtained in a still more remarkable way, to relate which will perhaps be interesting as a bit of curious history. I once had my bees construct a large number of queen-cells in January. This was done, not for the sake of the queens, but for the royal jelly, for which I had an order. I believe the man who wanted it had tried to get it of other bee-keepers, who had told him it was an impossibility to procure it at that season. There are very few things that are impossible. I undertook this and succeeded. I never found out definitely what the man wanted with it, though it was probably for medicine. He assigned another use for it, but this was too improbable to be considered. He paid me $25.00 per ounce for it, and probably thought I ought to be satisfied not to ask questions. This is probably the highest price ever paid for any of the products of the apiary.

Ottawa, Ill.

Colonies of Bees as Incubators.

BY A. S. ROSENROLL.

In 1880, I went from Winnipeg, North-West Territory, to Queensland, in Australia, and for a time lived in Brisbane, the capital of the colony. I occupied a cottage with garden in South Brisbane. This part of the city is situated on the south side of Brisbane River on a rich, grassy plain, partially enclosed by a bend of the river, and was only thinly settled in those days. The tidy cottage gardens and small orchards, and the fact that cows and horses were allowed to graze and roam unhindered within its precincts, gave the place a pleasing rural appearance.

I kept two saddle horses, and spent a good deal of my spare time, of which I had plenty on hand, in riding, hunting, fishing, boating and other sports. Occasionally Baron Von Rocderer—the son of the German minister in Switzerland, who I believe came to Australia as an explorer, and to study life on the goldfields, of which he would have required at least two for his own use to keep him going at the rate he was living—kept me excellent company in these pastimes.

In a shady nook of my garden, under a row of locust trees, I kept a few colonies of bees, which I had established on the Langstroth system. As a result of the mild, winterless, semi-tropical climate, the bees kept on breeding throughout the whole year, and I have considerable difficulty to prevent their excesses in swarming. However, through ventilation, removal of queen, etc., I generally succeeded in breaking the swarming fever, and obtained a fair harvest of splendid honey. The flora in these parts is certainly excellent, the large variety of eucalyptus trees, pitosporum and other shrubs, and the masses of wild flowers supplying an abundance of honey.

One day, in September, the spring month in the Southern hemisphere, while out hunting in the direction of Rocky Water Hole, I discovered a pheasant nest, containing nine eggs. I carried them home with me. Not being able to obtain the services of a brood hen, the idea struck me to let the bees hatch them. In order to carry this novel idea into effect, I took an empty comb-frame, 2 inches wide, and divided it by means of card board strips into a number of partitions, into which I placed the eggs, each one into a separate little nest. After covering both sides of the frame with wire netting, to prevent the bees from building in the empty spaces, I hung it into the brood-nest of a strong colony of bees, and waited for the result, making observations from time to time.

At last, after 15 days of patient waiting, my bees presented me with eight healthy and lively young pheasants, which appeared none the worse for having been hummed into life among such strange surroundings.

A second experiment which I made with fowls' eggs was similarly successful. An ordinary 2-inch wide Langstroth frame can easily be made to accommodate two dozen of eggs, which should occasionally be turned over, or the frame reversed.

In again following up my profession as a surveyor and pioneer engineer, which tied me for many years to a wandering tent life, far away from the haunts of civilization, I was prevented from making further experiments, but I have no doubt that this system of hatching eggs is capable of much improvement and extension, and well worth the consideration of poultry breeders, as expensive and complicated incubators could be dispensed with, and giant colonies of bees take their places.

Los Angeles Market—Selling Honey at Retail.

BY C. W. DAYTON.

The first honey I took into Los Angeles, in July, I expected to sell readily at a good price, because I had visited many apiaries and not found a ton of new honey, while many were feeding the bees. But, lo! a whole row of merchants stood up and declared independently that there was a *big* crop! But where? "In the mountains!" "In the mountains," thought I. Well, I should like to know what mountains. "All of them, the nearest,—about ten miles out."

As my price was 11 cents, and their price 8 to 9, it was not difficult to understand this piece of taffy, and the bulk of my load was stored in the house of a friend, except enough to peddle my way home again as I peddled on the way out.

Of all the ways to dispose of the crop this one of turning it right into the receptacles of the consumer suits me the best, and as a rule they will buy about as large a quantity at the country houses as at the retail store. And the more honey there is produced in a country the easier it sells. In this year of scarcity any one would naturally expect a brisk call for honey, but it is not the case. It takes a host of small producers to make a demand. It was nearly as easy to dispose of honey last year as this. The price then was a little lower, but there was more honey and the market alive. Other luxuries and most necessaries, are risen in price much higher than honey, while honey is also a substitute. There is not only a better price in the retailing, but the original receptacles are usually retained or exchanged. These are worth a cent a pound on the honey, besides shipping and cartage. Then to produce honey by the carload one has to locate so far from settled country that it costs at least a cent a pound more to get it out to railroad. To this add expense of help, rent and numerous other incidentals, and off years, and deduct the same from 4½ cents a pound, or less, and you will be able to receive what remains without the trouble of putting forth both hands.

Los Angeles is a city of 100,000, and a one-horse load of honey taken there and sold at the stores would cause a complete inundation, where, to distribute a like amount around to families would not amount to a taste. Then the dealer would show the next honey man a 12 or 24 pound case with a half dozen measley sections in the front end, and tell of the great deluge about to move down from "the mountains." Then, if the honey man was not posted, or accustomed to taffy in sections with no sharp corners missing, or could be induced to speculate with the aforementioned lazy bees, he might think himself lucky in arriving ahead of the great inundated and offer his at a still less price. This would convince the dealer of a certain deluge, and bring visionary carloads into all but fingers' grasp.

So it shows that to force honey upon the market is like pouring oil upon water, while delivering it to the consumer is literally taking it out in blocks as deep as broad. The one is big show and little profit, while the other is big profit and no one pinched, but many benefitted. And by the removal of cubes some one is rendered uneasy and kept so until other material, or more of the same, is secured to fill the breach.

If it is worth three cents a pound to produce five tons of honey (and I produced it for less last season), I look for at least three cents a pound more in the disposal of it. The trouble is that a great many prefer to work hard for a short time and then rest, when there should be enough love for their avocation to stay with it, or at it, the year around, or, at least,

as long as possible to be employed thereby. It is becoming the custom of the age to shun constant industry, so that when labor must be performed it is done hastily. When, on the other hand, to be moderately engaged the year around, it transforms into habit and enjoyment, which causes no more displeasure than an every-day coat. The commonest excuse is that they do not believe in "falling in love" with animals and things that way. A little consideration often reveals that they possess a *deeper* love for the "almighty dollar," or something else of corresponding level.

After all, the constantly employed way is, in reality, the surest way to obtain the mighty dollar, and for more than one reason; the principal one of which may be mentioned as creating an inexpensive and profitable enjoyment at home which dispels the desire for outside and expensive ones. A division of employment means division and reduction of enthusiasm, and with the loss of enthusiasm goes the enjoyment, although by the transaction hard dollars may crop out here and there, but of the kind which are very liable to be recklessly traded off for some enjoyment, to the exorbitant profit of some one else. Florence, Calif.

Wintering to Have Strong Colonies in Spring.

BY THOMAS THURLOW.

My 8 colonies of bees gave me the usual average of extracted honey last summer, 40 pounds per colony; but as two of them gave scarcely any, the average for the 6 was about 59 pounds, which is about what I get from strong colonies every year; and just there is where many failures comes in, to get all colonies strong when the white clover blooms. They start into winter strong enough, but so many bees succumb during the winter that it takes too long to build up in the spring. I lay it to the shallow Langstroth frame.

I have made bees a hobby, have read the American Bee Journal for years, and in all the controversies about hives and frames it is the decided opinion of experienced beekeepers that hives with a small horizontal diameter, but high, are the best for strong, early swarms, which means the best for surplus if there is any to be gotten.

One man has carried it to the extreme, wintering his bees in box-hives, hiving his strong, early swarms in the shallow Langstroth hives, getting his crop from them, and dumping them back into the box-hives for winter. Not such a bad plan when you count the wax in the shallow hive at 35 cents per pound, but the two sets of hives doing one set's work seems like going a good ways around when there is a short cut to the same end.

In my opinion, a 10-frame Langstroth is about the poorest shape that could be invented for wintering, and quick breeding in the spring; there is too much cold air space around the cluster, and the honey is spread over too great a surface. That a shallow frame is the easiest to handle, and the best for comb honey (if you have the bees), is a settled question; but my experience has been that with the best of care I cannot get more than two out of three in good condition, and very few booming-full of field-bees when the white clover commences to bloom, about May. So I have been for several years working to make the Langstroth hive a deep hive in winter.

First, I tried up-ending the whole hive after the Davis No. 7, of Vermont, and packing around with cork; but the Davis was built for that, and the Langstroth was not, and it was a dead failure.

Then I tried putting five frames over five frames, using two bodies, with division-boards and cork packings at the sides. It did not do,—too much cold air space at the ends; the bees were all at the top before Christmas, and I wanted them at the bottom. Last fall I tried again. I made inside cases out of thin stuff, 20 inches high, and large enough inside to hold 6 Langstroth frames standing on end and resting in V's cut in the edge of two thin strips, wide enough to keep the frames an inch or more from the bottom-board. An opening an inch high by 9 inches wide is cut out of the bottom of one side for an entrance. Small wire nails driven in on the inside opposite each frame near the top and bottom and standing out ¼ inch, with a space on the top ends, keep the frames in position. This I set in the centre of a bottom-board with a 9-inch piece cut out of the centre of one side of the strips the body sets on, for an entrance. Then set on two bodies and a 6-inch rim; put in a 9-inch wide bridge between the inside and case and the body at the entrance, and filled in all around with cork. I put in 6 frames of bees and drove the rest in at the entrance, and fed with fall honey until the frames were capped over as far down as I could see. I put a cork filled cushion over on top, then the cover, and the job was done.

I have fixed 5 hives this way, and have 5 in the old way, with a cork cushion in an empty body over the frames. The difference so far observable is, that with the old plan the bees are up to the top of the frames with a cold-air space all around them; while in the new-plan hives, by throwing a strong light down between the frames the bees can be seen, and they fill the whole body of the inside case about ⅓ the way from the bottom up (no cold air around them), and by the same plan they can be seen hanging to the frames below. Also, what is best and right, there is 25 pounds of honey in those 6 frames right over them—always warm and dry, until they use it up—and are booming-full of brood and bees in the spring. Then I shall put them back to their old position and fill up with comb.

Although it has taken a good many words to describe this inside case, it is really very simple and cheap. Five cents will pay for all the lumber in one, and the weight is nothing compared with the outside case, and they take very little room to store away in the summer. Lancaster, Pa.

A Visit to Florida and Her Bee-Keepers.

BY WM. A. SELSER.

After leaving Philadelphia, Nov. 24, on a two months' trip through the State of Florida, to examine into the bee, honey, and fruit business generally, my first stop was at Jacksonville, which is an old city on the St. Johns river, and is the seat of commerce of the State. At this point a large quantity of oranges are received from different parts of the State and reshipped by ocean steamers to Northern cities. After visiting some wholesale grocers who deal in honey, the writer proceeded to Palatka, a very important shipping point on the St. Johns river.

The visitor interested in agriculture will be surprised to learn, in traveling through the State, that general farming is not carried on at all, the soil generally being of a deep white sand, and fertilizing has to be resorted to in order to raise any crops at all. Oranges and vegetables are the principal things grown. Hogs are allowed to run at large generally, as well as cattle, but they do not thrive very well, and are of a very inferior quality and growth. The visitor is also impressed with the wild appearance of the country, and on looking out the car window tall evergreen pine trees and palmetto scrub meet the eye on every side. The saw palmetto, which seems to grow wild and thrive everywhere, grows to the heighth of 2 to 6 feet. My opinion, since traversing this State, and also nearly every State in the Union, is that there are less human beings living to the square mile of territory in Florida than any other State.

Across the river from Palatka are the first large orange groves of any extent. An orage tree matures very slowly, it being from seven to ten years before much of a crop is harvested, and it hardly arrives at its full bearing before 15 to 20 years, when, sometimes, 20 boxes of fruit are taken from a single tree. Orange trees, unlike other trees, live a long time, and will bear abundantly for 100 years, with proper care and attention. In fact, the oldest inhabitants cannot tell, as trees have been bearing as long as they can trace back. The value of an orange tree cannot be told by looking at the grove. No one acquainted with orange culture will buy a grove without seeing the record of what they have produced in past years. All growers of any note keep a record of just how many boxes their orchards produce.

Another important fact is, that a grove in growing may have good attention, but if neglected before it has attained its maturity, and left to grow wild a few years, no matter how much attention it may have afterwards, it can never be brought up to what it should be. A disease known as the "foot rot," which kills the trees, and an insect which punctures the skin of the fruit, producing what they call "russet fruit," are the greatest drawbacks to orange culture, with an occasional frost in some sections—which, if heavy enough, destroys the whole tree.

San Mateo, a few miles below Palatka, on the St. Johns river, is where the first bee-man is located. It was Mr. A. F. Brown, who is one of the very few bee-men who carry on migratory apiculture. He has about 150 colonies of bees situated on the banks of the river. He came here in October, and by Dec. 20 he expected his bees to commence to gather honey from the swamp maple, which blooms until early in February, is not gathered for market, but used to get the bees in good condition for the orange-blossom flow, which commences early in February, and lasts sometimes until in April, according to the season. Some years the orange yields more nectar than others, but, without question, if this honey could

be kept separate, it would be the finest flavored honey produced in the State, but bee-men do not go to the trouble to keep it separate from the wild plants and flowers which grow everywhere which yield a nectar the honey of which is a peculiar flavor, and spoils the rich flavor of the orange.

The writer, in his travels through the State, has found only one man who has produced absolutely pure orange-blossom honey, and that was only a small quantity. The flow should be watched carefully, and extracted daily, to secure pure orange-blossom honey.

In April Mr. Brown takes his bees over to the east coast, where in May and part of June they gather honey from saw palmetto, and from June to August they gather the mangrove.

The next stop was at Glenwood, one of the principal orange sections of the State. Here Mr. Brown had 160 colonies of bees from November, 1893, to April, 1894, and secured 80,000 pounds of mixed orange and palmetto honey. This place consists of one street for three miles, of solid orange groves on either side, the houses being mostly of frame set neatly in front of their groves of from 4 to 20 acres, with nice flower gardens and palm trees in front. The lawns do not amount to much in winter, as the grass mostly dies down, and the sandy soil does not permit the fine lawn grass to thrive like it does in the North.

De Land, a few miles further south, is also a great orange center. Jno. B. Stetson, by having spent thousands of dollars here in improvements, has one of the most complete orange-packing houses in the South, as well as building a university, halls, ice factory, water works, etc. Yellow pine trees are more numerous through the city than most places. Here the writer thinks of locating a branch apiary to breed early queens for delivery in February, March and April, returning to Pennsylvania in May, in time to breed early queens for that climate.

Five miles further south is Orange City, where the Gardner Brothers' apiary is located, which produced, this year, nearly a barrel of honey to the colony, several colonies giving 400 pounds each. The writer would say right here that most of the colonies of bees in this State are what we would call double colonies in the North—2 stories, 8 and 10 frames each, some with 12 frames, and both stories having most of the frames filled with bees. They then tier up in the honey-flow, sometimes four tiers high. Gardner Bros. are living alone, "batching it" on nice, high hammock ground. They have about 75 to 100 colonies of bees, and a promising young orange grove.

Lake Helen, just east of here, is a beautiful place on the banks of Lake Helen, and in a solid grove of pine trees—a most beautiful location. Here resides Mr. Geo. W. Webster, another migratory bee-keeper, located a mile south of town. He moves his bees to Smyrna in the summer, bringing them back in the fall. Eleven 500-pound barrels of honey from 55 colonies was his crop in 1894.

About 21 miles east of here is New Smyrna Beach, on the Atlantic Ocean, where the writer, on Dec. 11, had as fine a bath in the ocean as one would have at Atlantic City in August. New Smyrna is on the Hillsboro river, where the famous mangrove grows. It is a large bush, or bushy tree, growing in salt marshes, blooms abundantly, and yields immense quantities of a pure white honey that is considered the purest honey in the State; but, like all honey in the State, very little of it is gathered pure. A wild plant blooms at the same time and produces honey, and, mixed with mangrove, gives it a strong taste like tobacco stems. The writer bought several barrels of honey at the different places where the flavor was different, to take home and test it. I would say that three-fourths of the mangrove produced is mixed with this strong plant. Mangrove is very white honey, and easily candies, and in this condition could not be distinguished by its looks, when broken up, from confectioners' sugar. It is used here for sweetening coffee, tea, canned goods, etc.

Very large apiaries are located on both sides of the river, a full description of which will be given in my next.

One final thought as to the honey yield of the State in 1894 being such increase over previous years. It is explained by the fact that in 1886 a heavy frost killed the mangrove, or froze it all but the roots, and this is the first year since that it has commenced blooming. Also, about the same time cattle men in several parts of the State burnt off the palmetto to help the grass, and this has not happened in the last year or so. Each bee-keeper claims superiority for his own section, but only a disinterested party from another State can give a satisfactory explanation of the best honey and the best localities for producing it. A fuller and more detailed account will be given in my next communication.

Against Certain Bee-killing Ideas.

BY EDWIN BEVINS.

Allow me space in your columns, Mr. Editor, for a few words of argument and entreaty in behalf of the threatened bees. There is no good reason perhaps why I should constitute myself their champion, for I remember some early experiences that were very disastrous to them, but the harm done was chargeable to ignorance and not to design. Since those early days I am sure I have experienced some of the satisfaction which attends the transition from ignorance to knowledge and from knowledge to confidence, but my attitude is yet that of a learner at the feet of the Gamaliels of apiculture. It is because no one of these has yet opened his mouth in condemnation of the gigantic bee-killing scheme of John McArthur, that I venture to open mine.

Somehow I can't help looking upon this scheme as a piece of —shall I say it?—barbarity, that has no sufficient justification in human need. The man with ability to manage an apiary in a way to make a living out of it, is able to get his living in some way that calls for no such sacrifice. There is a generation of apricultural writers, now passing off the stage, who have labored long and well to teach us a better bee-morality, as well as better methods for the construction of our hives. Shall we profit by the mechanical part of their teachings, and pass by the ethical part unheeded? Are we going back to the sulphur pit, and multiply it by a hundred? Is retrogression, and not progression, the order among bee-keepers from this time on?

Mr. McArthur contends that there is the same justification for killing the bees that there is for killing the calf. I will contend otherwise. The two cases are not exactly parallel. In the case of the calf, it is reared for human food, if not as a calf, then at some later stage of its existence. It lives always with the slaughter-house in view. It owes everything to man's care and labor—shelter, food and all, from birth to death—and there is no way it can repay its owner for these except by surrendering up its life. It is not so with the bees. Their sustenance calls for little or no expenditure of human toil. They gather for themselves and us while living, sweetness that would otherwise be wasted on the desert air, and, when dead, their bodies are worthless for human food. Man has no just claim to any portion of their garnerings, beyond a reasonable compensation for the inexpensive house they live in and some labor given to protect them from winter's cold.

If the flowers yield nectar in the future as they have in the past it is reasonable to suppose that the bees will gather enough for their own sustenance, and a surplus that will more than recompense man for all that he does for them. If they will not do this, then I say let us abandon the pursuit.

In conclusion, let me entreat bee-keepers everywhere not to lend any encouragement to Mr. McArthur's bee-killing scheme, but, on the contrary, to stamp it hard and early with the seal of their reprobation. Leon, Iowa.

That Italian Bee-History Controversy.

BY C. J. ROBINSON.

MR. EDITOR:—On page 679 (1894) you apprise me that I am required to produce certified copies of certain records which you say are on file in the United States Department of Agriculture, to "sustain my position," alleging "that the United States lost more or less money in the transaction"—the so-called "Parsons importation of Italian bees."

It appears that as yet you have not been fully and correctly informed of the facts in the case at issue. Mr. Baldridge, you say, "claims to be in possession of the entire history, but has, up to this time, (a period of over 34 years!) made no attempt to make it public, preferring to 'keep in the dark,' so as to draw me out," and then controvert my "statements" (?). He is "in possession" of awfully long-winded patience, but his knowledge of current bee-literature is very circumscribed, else he would have been aware that in 1861 I was called out in the Country Gentleman by E. W. Rose, Esq., of New York, who was the first *individual* that imported bees from Italy, landing late in the season of 1861, imported per steamer "New York," in care of a young Austrian (Bodmer), who came over in charge of the ten colonies consigned to the United States Government, and the ten hives consigned to Parsons.

My "statements" about the consignments are corroborated by Mr. Langstroth—see American Bee Journal, page 82, 1881—and by a perusal of the Annual Report—Public Documents—of the United States Department of Agriculture, readers may learn from Parsons' report to his chief that he purchased "ten hives of bees" in Italy on the order trans-

mitted to him by the Department, and ten hives on his own account. Please note the "records" prove that Mr. Parsons *did* purchase ten hives of bees in Italy on Government account, the same as he was purchasing, as recorded by Dr. Riley, "cuttings and plants for testing in this country."

Still further, Mr. Langstroth records that he saw in Parsons' bee-yard in spring of 1860, "three different packages" of small boxes containing Italian bees which just came from Italy, and that "one of them was *consigned* to the United States Government and one to Parsons." Note, it is proved that Parsons purchased *ten* hives of bees on the Government's account, and that the package was duly consigned to the United States Government, and that the bees so consigned are landed in P.'s bee-yard, where they were—the package of boxes assigned to the United States converted by Parsons to his own use.

Then what? If the bees in the package consigned to our Government were not "*all* dead!" they were the same as dead so far as Uncle Sam was concerned. However, it was reported, per bee-yard, that every queen in the Government package was indeed dead (?), and only "a few queens were alive in the boxes marked for Mr. Parsons."

Now, my "position" was, and still is, that Parsons did purchase bees in Italy for which the United States Government "paid more or less money." The records referred to prove beyond a doubt that ten colonies of the bees—the same that were consigned to the Government—*were imported at the expense of the Government.* Mr. Parsons was constituted a Department agent to make purchases of "cuttings, plants," and bees in Italy, and he reported, as the record shows, that in pursuance of the order he purchased for the Department ten hives of Italian bees and ten hives on his individual account. This much of the history is not controverted. Mr. Parsons has never, I am sure, written a line relating to his, or that of the bees he purchased in Italy; though at times since 1861 I have endeavored "to draw him out" and explain.

The "position" taken by Mr. Baldridge, claiming that he "is in possession of the entire history of the" transaction by and between the Department and Parsons, is a gross assumption. He was in no way a party, and it is a plain impossibility for him to have personal knowledge of what was said and done by Parsons and the officials of the Department. His hearsay story could not be admissible in court, because he is incompetent—not able to give facts—yet he assumes the position.

I took a part in prompting the Department to import Italian bees, yet I have never published the senseless "claim" that I am in possession of "the entire history" of the importation. I have given the known facts in the case, and drawn conclusions therefrom which implicate Mr. Parsons as having dishonored a public trust, and his would-be defenders on record culpable of wanton deception.

Editor York demands that I "lose no time in having the records searched for proof in order to sustain my position,' that the Government "lost more or less money" expended to import the bees. The "claim" of Parsons is so improbable—so fallacious on its face—that it fails to counter and raise an issue.

The "claim" made by Mr. Baldridge, is that Parsons, while in Italy serving as Department agent, purchased some bees for the Government as per order issued by the Department, that he paid for the bees out of his own money (did he pay for cuttings and plants out of his individual funds?), and that the Government refused to honor its obligation to pay for the bees, consequently Parsons took "possession of them." Mr. Langstroth assured me that the "Government bees were *all* dead!" and said that "one package was marked for (consigned to) the United States Government;" and in answer to my "insinuation" that Parsons had no right to take the bees to his yard and give it out that only a few of the queens were alive, and they were found in the "package consigned to Parsons," Mr. Baldridge, in the role of a pettifoger, "claims" that because the Government, as he asserts, did not pay him the alleged disbursement he had a valid right to the possession (custody) of the bees (?). Well, the "claim" is that the Government held off after P.'s long trip, to get satisfaction, but conceding that P. paid for the bees, he kept them—in a legal view, embezzled the Government's property; and how about "trying to get money from the Government" when the bees were in "his possession"—in fact, converted? Does not the "claim," when viewed in the light of the facts in the case, look most unreasonable?

Everybody well knows that Uncle Sam pays from one to ten or more hundred cents on every dollar of his obligations, and the "claim" alleging that Parsons had a just debt against the Government for moneys laid out and expended, and payment refused, sounds, even to the most credulous, like an untruthful excuse.

You inform me that Mr. Baldridge will have more to offer. I hope he will fulfill the promise. I implicated him in a wrong in that he certified to what was impossible. I allude to Parsons' advertisement of Italian bees bred from queens that came from Italy in one of the "packages"—the advertisement is recorded in the early issues of the American Bee Journal, 1861. He challenged me to refute his statement, which I did to his satisfaction. Now, I in return challenge him to explain, if he can, his "testifying fully, from actual observation, to the great superiority of this race (Italian) over the common bee," in the spring of 1861, prior to there having been seen a whole colony of Italian bees in America. I will not "search the records" for evideuce to sustain my position "taken against Mr. Baldridge," for the editor can take up any of the early issues of the American Bee Journal and read the advertisement.

Richford, N. Y.

Thunder-Showers and Nectar-Secretion, Etc.

BY W. H. MORSE.

While thinking on the swarming of bees, an item came into my mind which is not of much value in itself, but has great bearing on the honey-production and of course the conduct of the bees.

I expect almost all bee-keepers have noticed that the honey-flow is more copious when thunder-showers are in the atmosphere, or when the peculiar state of the atmosphere is such as to produce an abundance of ozone, as this gas is a great stimulant to vegetation, more especially to the flower, or, rather, seed organs—in fact, to such an extent that plants that refuse to be operated on by artificial hybridization will, when this gas is present in a large quantity, cross with varieties which it would be almost impossible otherwise to obtain. So we see that anything that will affect the stamen and pistil must of necessity produce the like effect on the nectary, hence a large flow of nectar; and if the bees are equal to the emergency, every cell that is capable of being filled, is loaded in short order, and the results are preparing for swarming.

I remember in June, 1892, such a time occurred. The air was oppressive, but clear, preceding the rain, which fell in torrents six hours later. The linden was in full flower at the time, and a friend remarked on passing me, that there was a swarm of bees in that big linden, and, as a result, I was under that tree in a short time, but the swarm was nowhere to be found, but there were bees enough in the tree to make a swarm, and they were working (seemingly to me) on double-quick time. The surplus arrangement on my hives was small—being one super for comb honey, the bees at the time having them half drawn out with comb; the result of the thing was swarming, and I did not get 20 pounds from six colonies, but I did not intend to be caught in that order of things again.

HOW LONG POLLEN RETAINS ITS VITALITY.

While thinking over this scribble, it brings another item to my mind. I once experimented with pollen to see how long it would retain its power of fecundity, and found it perfect if stored in thin layers with tissue paper between them, and kept perfectly dry for eleven months. Take the pointer, Northern queen-rearers. Pollen would fill the bill better than flour.

Florence, Nebr.

The Sunny Southland.

CONDUCTED BY

MRS. JENNIE ATCHLEY, BEEVILLE, TEX.

Report of the South Texas Bee-Convention.

[Continued from page 58.]

As Dr. Marshall was interrupted near the beginning of his address by more bee-keepers arriving, at the same time, a committee was asked for to arrange the question-box for the next day, as there were not enough questions handed in by the bee-keepers to make a full box. W. R. Graham, C. B. Bankston, and F. A. Lockhart were appointed by the chairman to arrange the list of questions. At the close of Dr. Marshall's address, as the committee was not yet ready to re-

port, W. R. Graham was called on to speak, and did so as follows:

ADDRESS BY W. R. GRAHAM.

Dear Friends:—I never could talk, especially in public, but I will do the best I can. I will say that while there has been great progress made in apiculture, there are still millions of pounds of honey going to waste for want of bees to gather it. Nice comb honey is fine enough to adorn a king's table, and I *always* find sale for all the section honey I can produce, and I have noticed that when I have honey to sell, I can always feel a little money in my pockets, and when I have no honey I have but little money.

From what I see here, it is one of the finest bee-countries I ever saw, and all you need is bees to gather the honey. You have one of the best teachers on bees, and not only one teacher, you have five teachers right here in the Atchley family, and you should be able to do well right from the start, and not have to grope along as we had to do without a teacher. Why, I do not know what I would have given 25 years ago to have had a teacher like Mrs. Jennie Atchley. I could have been worth much more than I am to-day.

We may have large amounts of honey, but if we put it up in attractive shape, it will be as ready sale as cotton, or any other farm product. Take our State all over, and we have a wonderful bee-country. If I was young, like I once was, I would put an apiary here myself, as I see you have plenty of unoccupied ground.

When I started out to keep bees "kings" were all the rulers the bees had, but since then the king must have died, as the queen now occupies the royal chamber. It is said that bees never change, but their government surely does, as I believe now that it is neither king nor queen, but a "mother-bee." I bring up these things to show you how dark it was for us old-time bee-keepers, and still we do not know it all, and likely never will, as there is yet lots to learn about bees.

I think that any one may keep bees who wants to, as I do not think it is any harder to learn than any other business. I think one should understand bee-keeping before starting out too extensively, and in fact we should understand any kind of business before we embark too heavily, or we will most likely fail. My father was a farmer, and I can well remember, and yet hear the sound of the dinner horn in my imagination, ringing in my ears, and I thought it was the sweetest music I ever heard in all my life, to hear the horn toot, toot, toot, as I was always called on to go and hive the bees. Mother would not give many toots till I was soon on the spot.

One time I was stalled; it was on a Sunday, and father and mother had gone to church, and left me and two sisters at home. Well, as usual, the bees swarmed, and settled pretty high up on an apple-tree. I went right up after them, and began to saw off the limb, and soon I had it near enough off to fall, but it was not clear off, and it came down against the body of the tree so hard that it knocked the most of the bees off of the limb, and oh, my! how they did sting; and soon I came tumbling down out of the tree a great deal faster than I went up, and no sooner had I hit the ground when I was running, and my sisters took after me with brooms trying to kill the bees, but the more they fought the bees, the worse they stung. But finally we got them to stop, but I did not hive them this time. My face swelled up almost past recognition, and as soon as father came he said to me, "Ah, yes, young man; they got you this time, did they?" Father went out and hived them. The next day I had to fill my place between the plow-handles, and my face was so much swollen that it gave me great pain to walk at all, but I went right ahead as best I could, until father came and relieved me.

I have been engaged in keeping bees nearly all my life, and I used to think, 20 years ago, that I knew it all, and have just lived long enough to find that I know but little yet.

I always feel at home with a bee-keeper, and usually we find bee-men or bee-keepers to be good people. Come to think of it, I would love to have any of you show me a good bee-keeper that gets drunk, or that is not a temperate man. It seems that whisky and a bee-master won't stay in the same hide—as one goes in, the other goes out.

Dr. Marshall remarked that the more people you have here to go into the business, the better, as you can all ship your honey off to market in carload shipments, and save in freights. For instance, I have 1000 pounds of honey and you have 1000, and so on; we can put it together and make a carload, and be a great help to each other.

I see no reason why 100 bee-men should not do well here in Bee county. I have heard that the bee-business was like music—born in the person—and I begin to believe it a little bit, as I have tried to teach several people how to keep bees, and the more I told them the less they seemed to know; and then, again I have found people that were very quick to "catch on," and soon learn how to handle bees. We cannot learn it all from books—we must depend on our judgment as well as books, and start out as though we meant to make it a success, and I tell you that it won't be long till you will be "right in the ring"; and if you do run on some failures, don't tell everybody about it, but go to work and remedy the matter as soon as possible, without asking any one, and I tell you it will not be long till you will be a bee-keeper.

We have no wintering troubles here, and that is one of the puzzling questions we can leave out. Do not understand me that I do not read books, for I do read all I can get time, and we should post ourselves and keep right up with the times as nearly as we can. What I mean by not asking questions, etc., is, we should not take up our own valuable time, as well as that of our teacher, asking questions about finding a queen on a comb where we thought she ought not to be, and write a great long letter asking why she was over there. All those things we call foolishness, and if we are going to be much of a bee-keeper we will work out these simple things ourselves. W. R. GRAHAM.

(To be continued.)

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Wants Basswood Sprouts.

I would like to secure for next spring's planting about 50 or 100 basswood sprouts. Could you refer me to where I could get them at reasonable rates? W. S. M.

Farmington, New Mexico.

ANSWER.—I don't know a thing about it. Perhaps they could be had from some near nurseryman. A few years ago a man in the State of New York sold them quite reasonably, but I don't know whether he does now. A good deal of inquiry has been made lately, and it would be a good plan for those who have lindens for sale to advertise.

Botanical Names of Some Common Plants.

Did not Dr. Miller or the printers make a mistake in naming the plants on page 39? *Eupatorium rotundifotium* is boneset or thoroughwort. Horehound is *Marrubium vulgare*. Black horehound is *M. Ballota Nigra*. Horsemint is *Monarda punctata*, and not *punciata* as was given.

The smartweed, which yields honey in this part of the country, is *Polygonum Pennsylvanicum*, and not *P. persicaria*. Persicaria, ladies' thumb, is a plant of the same family, but is only about one foot high, and does not furnish any honey. Or at least that is my opinion.

The honey mesquite is *Prosopis juliflora*. All of these except the last are according to Gray, and he does not give the mesquite.

The catclaw I fail to find, and I doubt if this is the proper name. EMERSON T. ABBOTT.

St. Joseph, Mo.

ANSWER.—Thanks, Bro. Abbott. The easiest way for me to do would be to lay the whole thing to that rascally printer, John the German. But I don't think John had anything to do with it unless it be that he turned "punctata" into "punciata."

You are right, the common hoarhound is *marrubium vulgare*, and that's the one I ought to have given, but it seems there are several horehounds, and I took the first one I came to. I confess I feel a good deal as if I'd been standing on my head after hunting up some of these names, for they seem considerably mixed up in the botanies and bee-books. For example, horsemint, in Wood's botany—I'm sorry to say I havn't Gray's—is *Monarda punctata*, and also *M. fistulosa*, and in Prof. Cook's Manual it's *M. aristata*.

Are you sure you're not mistaken about *Eupatorium rotundifoltum?* According to Wood and the Standard dic-

tionary it's horehound, and not boneset or thoroughwort, which is *E. perfoliatum.*

I remember being somewhat mixed when trying to hunt up smartweed, and thinking at the time it was a *Polygonum*, but I couldn't find any authority for it, and you will see that you have become somewhat mixed yourself, for you tell me it is not *P. persicaria* (Ladies' thumb), which I did not call it, but *Persicaria mite* (Tasteless knot-grass). Perhaps Gray has turned all the *Persicaria* into *Polygona*. Dadant's Langstroth calls smartweed *Persicaria*. As a matter of fact, I don't think it is a smartweed at all, but a plant that resembles smartweed in looks, but entirely wanting the terribly pungent taste that smartweed has.

Pasteboard or Cloth Division-Board.

I intend trying to keep two colonies in single hives; would a division-board made of ¼ wood frame with thin glassed pasteboard (with or without perforations), or with cotton or linen cloth, nailed on the frame, be better, or as good, as the all-wood or zinc division-board, as far as heat and non-varying is concerned? H. D.

ANSWER.—Better than either, if two are to be kept as separate colonies, is a plain board ¼ or ⅜ inch thick. I've kept many colonies in that way successfully, and if colonies are not very strong it is an advantage, for each has the benefit of the heat of the other, and they will cluster up against the division-board, the two colonies forming one sphere.

Management When Hiving Swarms.

A great many people advise when hiving a new swarm to take the super, already commenced in, from the old swarm, and put it on the new. They say that by so doing the bees will commence in the super at once. Now, if they do, will not the queen also commence laying in the sections? I use full sheets of foundation in the brood-frames; perhaps that would make a difference. R. S. C.

ANSWER.—The advice is good in the main, for the large part of the gatherers are with the swarm, especially if the swarm is placed on the old stand and the mother colony—or the *souche* as the French call it after the swarm has left—be put on a new stand. But some judgment must be used, and your question shows that you have anticipated difficulties that may arise. There is danger in the very direction you suggest if you immediately put the super on the empty hive. If you use a queen-excluder between hive and super, then of course the queen *can't* go up. If you don't use a queen-excluder, then don't put on the super for two or three days, till the queen commences laying below.

Wiring Brood-Frames and Putting in Foundation.

1. What is the best method of wiring brood-frames so that the foundation will not bulge when being drawn out by the bees?

2. How near should the foundation come to the ends and bottom of the brood-frames? J. W. P.

ANSWER.—Most of my combs have six perpendicular wires, the foundation fastened to the top-bar, and coming within ⅜ inch of the bottom-bar, and within ¼ inch of the end-bars. It makes a good job so far as bulging is concerned, but the wires must be drawn quite tight to prevent bulging, and in that case it bows up the bottom-bar, and if the top-bar is only ⅜ thick, as my older ones are, it bends the top-bar too.

All that I've wired within a year or two have four horizontal wires, one within about an inch of the top-bar, one within an inch of the bottom-bar, and the other two placed at equal distances between these. It is not necessary to draw these wires so very tight.

With either of the two ways mentioned, there is an objectionable space left between the comb and the bottom-bar, and more or less between the comb and the end-bar. I'll tell you how I managed the last I made: They had the four horizontal wires as already described, and the top-bars, which were 1⅜ wide and ⅞ thick, had a saw-kerf cut in them to receive the foundation. This saw-kerf was 5/32 wide and ¼ deep. The foundation was cut the exact length of the inside of the frame, and 1/16 of an inch larger than the inside depth of the frame. The foundation was slipped into the saw-kerf, then allowed to come down and rest on the bottom-bar, then the wires were embedded. Left in that shape there would be sure to be bulging. So I cut out a strip of foundation ⅜ inch wide about ¼ inch *above* the lower wire, but didn't cut the full length of the foundation, only cutting to within an inch of the end-bar. Where bees were working well, the plan worked perfectly; in other cases they dug holes over the bottom-bar. On the whole, I like it best of anything I've tried.

Propagating Basswood from the Seed, Etc.

Will the basswood grow as far south as this, do you think? And what time would it probably bloom here, in northeast North Carolina? Our sourwood blooms from about June 20 to July 15. Would I have to buy the trees, or can they be propagated from seed? R. B. H.

ANSWER.—I doubt if basswood flourishes as far south as North Carolina. Who can tell us how far south it is found? If it does grow there, I think it might bloom a week or two before sourwood. It isn't easily propagated from seed.

Uniting Colonies of Bees.

In your method of uniting colonies of bees by placing one colony above the other with a piece of thick paper between, you say allow both colonies their full entrance. What is to prevent the bees of the moved colony from returning to their old location and getting lost? R. B. H.

ANSWER.—Not a thing. It's a good bit the same as putting them on a new stand. So it is well to take some previous precaution. I've generally united two colonies standing side by side, in which case there is no trouble. In case the moved colony is queenless, it is more likely to stay where it finds a queen. But then in uniting, generally the thing desired is to get rid of an objectionable colony, and if some of the bees do go back to their old stand and unite with one of the nearest colonies, no harm will be done, providing it is at a time when bees are yet gathering something, and so do not seek a new home with empty honey-sacs.

Now mind you, I don't warrant the plan a success. I only say it worked with me the few times I tried it. A writer in the British Bee Journal reports that he tried it, and his bees were killed. I have a suspicion that he allowed no exit for the bees of the upper hive except to come down through the lower hive. In that case I should expect fighting pretty generally.

Foundation in the Sections—Extracted vs. Comb Honey.

1. Does it pay to use full-sized foundation in the sections, or will starters do about as well?

2. What per cent. more honey can be produced by extracting than by furnishing foundation and taking comb honey?

Russellville, Mo. L. G. C.

ANSWERS.—1. I think the majority of bee-keepers agree that it pays to get the sections as nearly filled with foundation as possible. It gives a larger surface that can be all worked at the same time. It makes the comb all worker, which looks better, and, besides, if you have only starters, and the bees make drone-comb to fill out, as they certainly will to a great extent, the queen may go up and lay in the drone-cells, whereas if all were worker she would be content to stay where she properly belongs. If you have excluder-zinc between the hive and super, of course the queen can't go up, but all the same the workers are expecting it, and are likely to leave drone-cells empty awaiting her, in which case the sections will not be so promptly filled and sealed.

2. I don't know. Nearly all agree that more extracted honey can be obtained than comb, although I think a few say they can get just as much comb. But those who say they can get more extracted don't by any means agree as to how much. It's all the way from a little more to twice as much. Even if you knew exactly the average that all would agree on, I'm not sure that it would be a correct guide for you. The fact that there is so much difference of opinion is pretty good proof that the thing varies according to circumstances or the man who runs it. The way for you to do, if you care to have a correct answer—and it may be worth a good deal to find out—is to take an equal number of colonies, of the same strength, give them the same chance, and at the end of the season you'll know something about it. At the end of three years you'll know more, and you'll know more by having 25 colonies of each kind than if you have only one. Of course, I mean one lot shall be run for extracted honey and the other for comb honey.

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DR. F. L. PEIRO - - - - - "DOCTOR'S HINTS."

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Editorial Comments.

The Extracted Honey Article, by Mr. Chas. Dadant, is omitted this week on account of its not getting here in time. But the series will likely be completed in these columns in good time for use the coming season.

A Great Bee-Hive is what the Mammoth Cave, of Kentucky, is becoming. So says an exchange. Judging from what I have heard about its capacity, it would take a pretty good-sized crop of honey to fill it. Still, some of the California friends, in a good season, might doubt its ability to hold their big yields!

Dr. J. P. H. Brown, of Augusta, Ga., wrote me as follows on Jan. 17: "This has been the coldest winter since 1886. This is not the 'Sunny Southland' now." It has been pretty cold here in Chicago, also, this winter, but nothing very severe yet. I think that 8 degrees below zero is the coldest so far. Still, there is time enough yet for real cold weather here.

Empty Comb and Comb Foundation will be valuable in California this year. Mr. N. Levering says this about it in the January California Cultivator:

There never has been a season since the introduction of apiculture in California when empty comb and comb foundation will be so highly prized, and their true worth so correctly estimated, as in the coming season of 1895.

Mr. Wm. A. Selser, who lives near Philadelphia, Pa., has been traveling about 3,000 miles over the State of Florida the past month or two. On page 67 he begins to tell something about his visit, for the readers of the American Bee Journal. Mr. Selser called on Gleanings on his way home, and Editor Root says this about him and his trip:

He had been all over the State just previous to the great freeze, and all over it again just after it. He reports that all the beauty of that remarkable State is gone. Everything seems to have been killed from one end of the State to the other; and the mangrove—one of the main stays for honey—has been so thoroughly killed that it will take it three or four years to recover. Although the bee-keepers will get honey as before from palmetto, their large crops will be cut down very materially until the mangrove can begin to yield. There is desolation in the orange-groves, and they are characterized as "slop-tubs," by reason of the carloads of decaying fruit.

The article on page 67 was written before "the great freeze," referred to in the above paragraph.

Poor Seasons come to all other industries, as well as to bee-culture. Mrs. L. Harrison, whose home is in Peoria, Ill. (but in winter at St. Andrew's Bay, Fla.), offered some encouragement to those who have suffered from poor honey seasons, in the Prairie Farmer, awhile ago:

Another poor honey season has come and gone. Well, bee-keepers are getting used to it, like the poor lobsters that the woman had been cooking alive for so many years. Bee-keeping has been painted in such bright colors by many writers, it is well to look on the shady side occasionally. Dr. Miller, of Marengo, Ill., who is a veteran bee-keeper and voluminous writer, and whose bee-songs have a world-wide reputation, reports his crop of honey for 1894 as averaging 1¼ ounces per colony. He has not marketed his crop, so does not report his sales. To his out-apiaries, and to the one at his home, he fed 1,500 pounds of sugar to keep them from starving.

In some localities of Illinois, especially along water-ways during the fall, bees were able to store some surplus. Our bees averaged 12½ pounds of surplus, and had abundant stores for winter, without feeding.

Dandelions were blooming Nov. 1, and bees carrying water, which was unusual.

Bee-keepers should make a note of this: That is, of young bees being reared so unusually late in the season, and see whether the colonies come out in the spring stronger on account of it. The fall was favorable for the development of white clover, and bee-keepers should look well after their colonies, for the wise man says: "What has been will be again," and we may again be favored with nectar secreted in the corollas of white clover blossoms.

Ironing-Pad.—It is always a pleasure to learn new and practical uses for honey or beeswax. I believe that all good recipes using either of them in their make-up, should be published, so that everybody may know about it, and thus help to create a greater demand for these two products of the apiary. Mr. Jas. A. Minnick, of North Anderson, Ind., has sent us another recipe using beeswax:

Procure a strip of muslin seven or eight inches wide, and 24 inches long. Now place a sheet or two of hard calendered note-paper, about five inches wide, across one end of the muslin; scatter a few thin chips of beeswax on the paper (or, better still, a cloth four by six inches dipped in melted beeswax). Now pass the long end of the muslin over the top of the wax and around underneath and over again, so that about two thicknesses will be over the wax. While ironing, occasionally pass the iron over the pad. My, how slick the irons slide over the clothes! It also removes roughness, and prevents rust.

Pretty Good Advice.—In one of my exchanges I read this paragraph:

At the beginning of the new year forgive all who have wronged you, and let them take their own road to ruin. They will go there fast enough if they really are as mean as they seem to you. But love all your friends the more. Genuine affection and good-will are the scarcest commodities in the world, scarcer even than money, and more to be prized. The world is languishing and dying for them.

I want to commend the above paragraph to all those who are afflicted with chronic jealousy, and a burning desire to build themselves up by trying to tear others down. Friends, *it can't be done*, for the more some kind of people are persecuted the greater their prosperity. The more the ancient Israelites were oppressed in Egypt, the faster they multiplied. It doesn't pay to fool with a boomerang, nor to mind other people's business.

Honey vs. Butter.—In reply to the questions, "What is honey?" and "Which of the two—butter or honey—is the most beneficial as food?" Mr. Thos. Wm. Cowan, editor of the British Bee Journal, says:

Honey is composed of the sweet nectar exuded by certain flowers, and gathered therefrom by bees. We don't quite know if our correspondent's query is intended to ascertain the component parts of honey from the chemical standpoint; but it certainly would not assist sales to inform buyers what proportions of oxygen, hydrogen, and carbon are embodied in it. It is more beneficial than butter as food for children, because of its readily assimilating with whatever food is partaken of along with it.

Very Kind Notices are being given the American Bee Journal by many of my brother editors, as well as a host who have expressed their satisfaction and pleasure by mail privately. I should like so much to print *all* the generous commendations received, but if I did so I fear there wouldn't be room in the Bee Journal for much else. I trust that all who have been so very

kind, will accept my heartiest thanks, and believe me when I say that I appreciate their encouraging words very much. Life and health continuing, I shall try hard to merit all the good things my friends have expressed.

Editor Root said this about the American Bee Journal, in Gleanings for Jan. 15:

The new American Bee Journal, as it came to our office shortly after Jan. 1, was a pleasant surprise. It has been changed from a 32-page small to a 16-page large size. The printing and binding, of course, as usual, are excellent, and the selection of matter is also of the highest order. If it can maintain the pace that i has set for itself (and York will make it), the "Old Reliable" will boom.

Mr. Thomas G. Newman, who for nearly 20 years previous to June 1, 1892, was the editor of the Bee Journal, writes thus in the January number of his Illustrated Home Journal:

The American Bee Journal has changed to a 16-page quarto again, similar to what it was ten years ago. It deserves all the success it is now blest with, and we wish that its revenues were ten times greater than they are. The first article of the initial number of 1895, by Chas. Dadant, is very interesting, as are several others in that issue.

Mr. W. M. Barnum, of Denver, Colo.—who is one of the number that "crack the nuts" in the Question-Box—wrote as follows after receiving the second number of the Bee Journal for 1895:

I have just finished perusing the last American Bee Journal—from the beginning to the end—and among the many good things was one that particularly pleased me. Our good and observiug friend—the "Gleaner"—a good man in a good place, by-the-by—has something good to say about the new form and appearance of the "Old Reliable," as follows: "'Tisn't our old friend at all..... and we always look with an evil eye upon any usurper," etc. Now the funny part, and the part I take exception to, is his first part—*it is our old friend*—the "good old American Bee Journal" of 10 years ago! It is our own, long lost and dearly cherished "child" of 10 years ago!! It does my eyes good to see it once more; and I "just won't" tolerate any such derogatory affirmations from even our friend Gleaner!

But, all levity aside, I much prefer the new form for several good reasons, viz.: First of all, it is easier to read, and just as conveniently handled. It is neater in make-up, the paper is better, and the character of the reading matter is bet—! Well, Bro. York, I am afraid you will surely have that case of "big head" you referred to on page 40—so I'll desist. You have *done well*, however—and here's my ☞! WM. M. BARNUM.

Basswood Trees and Alfalfa.—Many bee-keepers are now enquiring at this office where they can buy basswoood trees and alfalfa clover seed. If any one has either or both for sale, why not advertise the fact in the American Bee Journal? It would pay to do so. It seems a pity that people can't get what they want, when there are other people who have it for sale, and yet don't seem to be wise enough to advertise.

Mr. William A. Pryal.

Mr. Wm. A. Pryal, of North Temescal, Calif., whose picture I am pleased to show on the first page, was born in San Francisco, his parents being among the early settlers in that city. His father was one of the very first nurserymen and horticulturists of California. The first few years of William's life were spent in his native city, and at Napa city. In 1862—the year of the flood, well remembered by all old Californians—the family removed to Oakland, then but a small town. The same year the place that has since 1864 been the family home, was purchased from Dr. Gwin, then United States Senator from that State. This place is considered one of the prettiest spots in the Golden West, and is directly opposite the Golden Gate, and not over 3½ miles from the eastern shore of the Bay of San Francisco. For some years prior to the ex-Senator's death, W. A. had charge of his landed interests in Alameda county—was his attorney and agent.

On the family homestead Mr. P. learned all about farming and the nursery business, including the culture of flowers and vegetables; also the growing and marketing of fruit.

About 1866 his father purchased a number of colonies of bees in Temescal; the same year Mr. A. J. King, since well known as the editor of the late Bee-Keepers' Magazine, was hired to teach in the district school, at which the subject of this sketch was a pupil. Mr. King initiated him into some of the "mysteries of bee-keeping," and gave him a copy of the "Bee-Keepers' Text-Book," issued a few years previously by Mr. K.'s brothers. It was in 1868 that Mr. Pryal took any marked interest in bees. Owing to his studies, it was not until 1876 that he thoroughly developed the bee-fever. Though he had commenced to write on horticultural and floricultural topics before that time, it was during the summer of '76 that he wrote on subjects relating to bees. These early writings were mainly about the honey-flora of central California. Ever since that time he has given a good deal of attention to the flowers that yield honey in that State.

Owing to other duties he has never been able to care or more than 70 colonies of bees in any one year. During the past three years his brothers have given some attention to the apiary. His experience with bees has embraced nearly every phase of the business; though producing some comb honey, extracted was the leading crop for the past ten years.

Mr. Pryal was educated at public and private schools; finished a business course at St. Mary's College; entered the State University, but did not remain to graduate. He clerked in a law office a few years; was engaged in practice of law when he was offered a place on the staff of one of the Oakland daily newspapers; after five years of daily newspaper life in that city, he bought an interest in a San Francisco weekly, which he edited and managed for two years, or until he sold out.

When a mere lad, Mr. P. had some experience in the building of the pioneer water works of Oakland. The originator and president of the pioneer water company of that city used to go out to the "Pryal ranch," as it was then called, and do more or less surveying for the new enterprise. Not having an assistant to hold his chain or pole, the president would press him into service as "his assistant." The first water for the then growing town of Oakland was piped from a dam on his father's place, a distance of four miles. Strange as it may seem, he is again building up another water company. This time it is a rival one, and his work is now done not merely as child's play, as it was in reality when he assisted in helping the man who gave Oakland and San Francisco their first water works. Since early in 1894 he has been in the business department of the new and rival water company of Oakland. It is one of the most perfect water systems in the world. The water is brought from artesian wells that discharge a wondrous amount of water daily. These wells are 18 miles from the city, and powerful pumps force the water into reservoirs above the city, whence it is distributed through Oakland and adjacent towns and cities by one of the most perfect net-work of water mains ever laid in this country.

Mr. Pryal believes that he will nover again be able to attend to more than a few colonies, as his time is altogether employed in other channels, as mentioned. Even his brothers have turned their attention to work that no longer allows them to manage the bees. For this reason he contemplates selling off the major portion of his apiary during the coming spring.

His first bee-writings were over the *nom-de-plume* of "U. K. Lyptus." He has written for the agricultural as well as the apicultural press of the country, and was for many years a correspondent of the Pacific Rural Press, of San Francisco.

Mr. Pryal is the oldest of nine children, three of whom died during the past four years.

In May, 1893—during the World's Fair—I had the pleasure of meeting Mr. Pryal, and enjoyed his visit very much. He is an interesting conversationalist as well as journalist. I am glad to count him as one of my personal friends.

THE EDITOR.

Among the Bee-Papers

Conducted by "GLEANER."

WINTERING BEES INSIDE.

Chas. Dadant, in Prairie Farmer, says he tried silos for wintering bees, and they did splendidly, the first two winters being dry and cold. Then came a warm and moist winter, and the bees suffered badly. He thinks the temperature of a cellar should not be allowed to go below 40°, nor for any length of time above 48°. In his latitude—about 40½°—he prefers to winter bees on the summer stands.

PROFIT FROM COMB-BUILDING.

The question is raised in the British Bee Journal whether it may not be a good thing for bee-keepers in the southeast of England to sell their combs to those in the clover district, afterward to be sent to the moors to be filled up with heather money. The average American bee-keeper will likely ask,

"Why not each one keep his own combs from year to year, same as we do?" For the simple reason that the moor-man can't extract his honey. It is too thick, and must be used in the comb or else pressed out. Of course that settles it that the combs in which heather honey are stored can never be used a second time, only the wax can be saved, and if he can get enough more honey with combs fully built out he can afford to pay a price for them that will make it profitable for the man farther south to renew his combs every year.

There have been, and I think are now, places where wax rather than honey is the source of profit. Is all the profit made of wax that should be in this country?

GETTING WORKERS FOR THE HARVEST.

Gravenhorst, the septuagenarian editor of the Deutsche illustrierte Bienenzeitung, repeats what he has always strongly insisted upon, namely, that it is absolutely necessary for highest success that each bee-keeper know the time of the blooming of the flowers that yield a surplus in his locality, so that he may have workers ready for the harvest at exactly the right time, and then he quotes from the American Bee Journal Doolittle's article on the same subject.

THE "MUTUAL ADMIRATION" BUSINESS.

Editor Merrill, of the American Bee-Keeper, enters a mild protest that his position has been sadly misconstrued, as he fully believes in having everything harmonious. But he still thinks that what one puts in the columns of his paper "should be of interest to *all* his readers, and not to some individual one. For instance, who cares if 'Bro. A. has lost a valuable cow,' or Editor B. had the grippe last week?' If Bro. A. or Editor B. is a personal friend, convey your sympathy to him by a personal communication. Don't take valuable space in your editorial columns to do so." All of which has a good deal of sense in it, even if it does get a bit away from the question in hand. And yet, what some other editor might consider an individual matter may be of interest to every reader of the American Bee-Keeper. Common sense must be used.

THE AMERICAN BEE JOURNAL FOR JAN. 10.

Rev. E. T. Abbott starts out in a very interesting manner talking about comb honey, but does he know what a "swarm" he's likely to bring about his ears by his reckless way of striking at the pet plans and projects of others? "Italians not best for comb honey," and "It is the swarming bees that gather honey." Whew! Look out for breakers. But please, Mr. Editor, don't allow Dr. Miller to interrupt any more with his frivolous objections.

Seems good to have Dr. Gallup telling us about bees again. I'm sure "Business" must be very fault-finding if he can object to anything on page 19.

Mrs. Harrison says sweet clover is classed among noxious weeds. Does that mean law? If so, it would be a good thing to have the law printed, for fear some one may unwittingly break it, and if there's anything unjust about the law it may as well be known, and possibly the law might be changed.

What an aggravating man Prof. Cook can be when he tries! In that note on page 24 he tells us that he talks bees at every institute, and then shuts his lips tight when we're expecting him to tell how that thing was brought about.

Canadian Beedom.

Conducted by "BEE-MASTER."

At the Stratford Convention.

To-day (Jan. 22,) the annual meeting of the Ontario Bee-Keeper's Association commences at 1:30 p. m. Already, this a. m., there is quite a gathering of the clans, and interested groups are discussing matters and things in various parts of the Windsor House, which has been made head-quarters. President Pickett is handing around a fine large picture of his apiary and part of his family, which is much admired.

There is much sympathy felt and expressed for F. A. Gemmill, whose health is in a poor state, so that he is seeking leave of absence from the railroad company for three months in order to take a trip to California. We are afraid a visit to that sunny southland may unhinge him, and lead him to go there "for good," as the saying is. J. Allpaugh, a prominent Canadian bee-keeper, is there now reconnoitering, and, it is said, he has fallen deeply in love with the country and climate. That "Rambler" man, who writes those vivid and funny California articles in Gleanings, is doing mischief unsettling folks. It is a pity he doesn't get married and stop wandering all over creation, picking out nice places for people to move to. Some of us are fixtures, and must console ourselves with the reflection that we can produce far better honey than the Californians, though not in such large quantities.

The Best and Solidest Organization.

The following "Stray Straw" will be found in Gleanings of Jan. 15th:

"R. McKnight, in his St. Joe essay, says the Ontario Bee-Keeper's Association is 'the best and solidest organization of its kind on this continent.' The worst of it is, that what he says is true. Yankees can't come up to Kanucks in that sort of thing."

Why not? Whatever man has done, man can do.

Sweet Clover—Cellar-Wintering.

Sweet clover appears to be feared by some as a bad weed. It is nothing of the kind here in Canada, but can be extirpated with the greatest ease if it is thought desirable to do so. But there is great difference of opinion among our bee-keepers as to the value of it as a honey-producing plant.

Cellar-wintering of bees is preferred by many Ontario bee-keepers, especially in the more northerly parts of the country where the thermometer sometimes registers 10° or 12° below zero for a couple of weeks at a time. In other localities where the weather is more moderate, and there are spells of warm weather, out-door wintering in double-walled and chaff-packed hives is preferred, because of the opportunity thus afforded for beneficial out-door flights. During these warm spells, too, bees in the cellar are apt to become uneasy, leave the hives, and get lost.

The Lambton Bee-Keepers' Convention.

The annual meeting of the Lambton Bee-keepers Association was held at Wyoming, Ont., Saturday, Dec. 24th. There was a large number present, some of whom drove a considerable distance. The President, Mr. Mowbray, occupied the chair. The minutes of last meeting were read and adopted, and the Secretary-Treasurer presented his report.

The election of officers and directors for the ensuing year resulted as follows:—President, W. Mowbray, of Sarnia; Vice-President, C. Boyd, of Petrolea; Secretary-Treasurer, J. R. Kitchen, of Weidmann. Directors, E. A. Jones and Geo. Forbis, of Lertch; W. Granger, of Wyoming; John Armstrong, of Wansted.

The President gave an address on "Bee-keeping of the Past, and Present." He showed that years ago the expense of the apiarist in securing a crop was less than at the present time, and that prices for honey were better. He also spoke of associational gatherings and how to keep up an interest. He wished to know the condition of the members' bees at the present time. "The reason," he says, "I ask this question is that my own bees are weak in numbers and are principally old bees, all on account of the short honey crop, which I am afraid will bring mortality to many a bee-yard." Some of the members' bees were in the same condition, while others were not, the condition of them varying according to locality. The President stated that had he attended to the bees as he should, he could have remedied the existing condition of affairs. A member: "How would you have remedied it?" "By feeding earlier in the fall, which would have stimulated brood-rearing and secured plenty of young bees to go into winter."

The question was asked: "Has anyone tried the Wells' system of producing comb honey?" Mr. Jones said that he had been trying some new experiments and that some of the neighboring bee-men had been laughing at him, but it was by experimenting that the industry advanced. During the past summer he had placed four separate hives in one case with one tier of sections above and queen-excluding zinc between. The bees from the different queens then freely mixed together in the one case of sections, but, as he stated, one poor season was not enough to test its merits or demerits.

The next meeting will be held at Petrolea, on the second Saturday in May, 1895. J. R. KITCHEN, *Sec'y-Treas.*

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

PUBLISHED WEEKLY BY

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At One Dollar a Year,

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Lost Numbers.—We carefully mail the Bee Journal to every subscriber, but should any be lost in the mails, we will replace them if notified before all the edition is exhausted. Please don't wait a month or two, for then it may be too late to get another copy.

Emerson Binders, made especially for the American Bee Journal, are convenient for preserving each weekly Number, as fast as received. They will be sent, postpaid, for 75 cents, or clubbed with the American Bee Journal for one year—both together for $1.60. They cannot be sent by mail to Canada.

BEESWAX WANTED!

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Don't fail, before buying or selling, to write for Prices and Samples—to

GUS DITTMER,
AUGUSTA, WIS.

Reference—Augusta Bank. 16Atf

Convention Notices.

MINNESOTA.—The regular semi-annual meeting of the Southern Minnesota Bee-Keepers' Association will be held on the first Monday in May, 1895, at LaCrescent, Minn. All bee-keepers invited. E. C. CORNWELL, Sec.
Winona, Minn.

WISCONSIN.—The 11th annual meeting of the Wisconsin State Bee-Keepers' Association will be held in the Capitol, at Madison, Feb. 6 and 7, 1895. All bee-keepers are requested to attend, whether they receive a formal notice or not. H. LATHROP, Rec. Sec.
Browntown, Wis.

NEW YORK.—The Cortland Union Bee-Keepers' Association will hold their Annual meeting at Good Templars' Hall, Cortland, N. Y., Saturday, Feb. 9, 1894. All interested, especially bee-keepers, are cordially invited to attend. C. W. WILKINS, Sec.
Homer, N. Y.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association on March 16, 1895, at Goodeo's Hall, in Bronson, Bourbon Co., Kans. It is the annual meeting, and all members are requested to be present, and all bee-keepers are cordially invited. J. C. BALCH, Sec.
Bronson, Kans.

CALIFORNIA.—The California State Bee-Keepers' Association will hold its fourth annual meeting on Tuesday and Wednesday, February 5 and 6, 1895, at the Chamber of Commerce, corner of 4th and Broadway, Los Angeles. Programmes will be ready Jan. 15.
PROF. A. J. COOK, Pres.
J. H. MARTIN, Sec., Bloomington, Calif.

RUDY'S PILE SUPPOSITORY

Is guaranteed to cure Piles and Constipation, or money refunded. 50 cents per box. Send two stamps for circular and free Sample to MARTIN RUDY, Registered Pharmacist, Lancaster, Pa. NO POSTALS ANSWERED. For sale by all first-class druggists everywhere. Peter Van Schaack & Sons, Robt. Stevenson & Co., Morrison, Plummer & Co., and Lord, Owen & Co., Wholesale Agents, Chicago, Ills.
Please mention the Bee Journal. Nov15

Fruit Plants. Where to buy them at wholesale prices. Send postal for descriptive and wholesale catalogue of all of the leading varieties of the **Strawberries, Raspberries, Blackberries, Currants, Gooseberries, Grapes and Potatoes.**

EZRA G. SMITH, Manchester, Ont. Co., N. Y.
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Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

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This Advertisement Changes Every Week—**Watch It.**

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"The foundation came all right, and to say that I am well pleased with it would be putting it mildly. If the bees like it as I do, there is nothing more to be desired.—M. Woodcock, Flint, Mich., July 2, 1894."

☞ If you want to be pleased also, just order some of the **Cheapest Foundation** made.

W. J. Finch, Jr., Springfield, Ill

Mention the American Bee Journal.

HONEY In 60-pound Cans, 6 cts. In 52-gallon Barrels, 5 cts. Sample free.
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5Atf CAMERON, TEX.
WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

For Sale—**Alfalfa Comb Honey**—snow-white, 12 cts.; partly from Cleome, light amber, 11c. per lb.
D. S. JENKINS, Las Animas, Colo.
5Atf *Mention the American Bee Journal.*

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Dec. 27.—Up to the present the sales on honey have met with our expectations. We have received considerably more honey than we figured on handling, owing to the short crop report, and we think the early shippers reaped the benefit. However, we are now getting the average price, viz.: Fancy, 15c.; white, No. 1, 14@13c. Extracted, 6@7c.
Beeswax, 28@29c. J. A. L.

CHICAGO, ILL., Jan. 3.—As usual, the volume of trade in honey is small at this season. But our stock is not heavy, and soon as this month is past we expect a demand that will clean out all present and prospective offerings. Comb sells at 14c. for good white; fancy brings 15c.; dark grades, 8@12c. Extracted white, 6@7c.; dark, 5@6c.
Beeswax, 27@28c. R. A. B. & Co.

NEW YORK, N. Y., Dec. 20.—The market for comb and extracted honey is good, and the supply equals the demand. Fancy clover and buckwheat sells best; off grades are not quite as salable; and 2-pound sections are little called for. We quote as follows: 1-pound fancy clover, 13@14c.; 2-pound, 12½@13c.; 1-pound white, 12@12½c.; 2-pound, 12c.; 1-pound fair, 10@11c.; 2-pound, 10@11c.; 1-pound buckwheat, 10@11c.; 2-pound, 9@10c. Extracted, clover and basswood, 6@6½c.; buckwheat, 5@5½c.; Southern, 50@60c. per gallon. Beeswax, scarce and in good demand at 29@30c. C. I. & B.

CINCINNATI, O., Jan. 7.—Demand for honey is very quiet since the holidays, and prices are unchanged. Comb honey brings 14@16c. for best white, and extracted 4@7c.
Beeswax is in good demand at 23@28c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, Mo., Jan. 7.—The demand for both comb and extracted is light. Supply good. We quote: No. 1 white comb, 1-lbs., 14@15c.; No. 2 white, 12@13c.; No. 1 amber, 13c.; No. 2 amber, 10@11c. Extracted, white, 6@6¼c.; amber, 5@5½c.; dark, 4¼c.
Beeswax, 22@25c. C. C. C. & Co.

BUFFALO, N. Y., Jan. 21.—The honey market is very quiet. We quote: Fancy, 13@14c.; choice, 10@12c.; off grades moving slowly, trade being only on fancy; buckwheat slow at 8@10c. Extracted very dull, at 5@6c.
Beeswax, 28@30c. B. & Co.

NEW YORK, N. Y., Dec. 31.—The demand for comb honey has been very light of late and has now almost dwindled down to nothing. The supply has been accumulating and there is a large stock on the market. In order to move it in round lots, it will be necessary to make liberal concessions from ruling quotations. We quote: Fancy white, 1-lbs., 13c.; off grades, 11c.; buckwheat, 9c. We have nothing new to report in extracted. It is moving off slow and plenty of stock on the market, with more arriving. Beeswax is steady and finds ready sale on arrival at 30c. per pound. H. B. & S.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

J. A. LAMON, 43 South Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 28 & 30 West Broadway.
CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.
FRANCIS H. LEGGETT & Co., 128 Franklin St.

Kansas City, Mo.

CLEMOMS-MASON COM. CO., 423 Walnut St.

Albany, N. Y.

H. R. WRIGHT, 326 & 328 Broadway.

Buffalo, N. Y.

BATTERSON & CO., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

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Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Five-Banded vs. Three-Banded Bees.

Query 956.—Do the 5-banded Italians average better than the 3-banded, or worse?—Texas.

B. Taylor—I see no difference.

W. G. Larrabee—I don't know.

Dr. J. P. H. Brown.—Not *one bit* better.

P. H. Elwood—I never had any 5-banded bees.

E. France—I don't know. I don't want any Italians.

G. M. Doolittle—Equally as good, or better, during 1894.

Mrs. L. Harrison—I have had no experience along that line.

Jas. A. Stone—I never tried them together, therefore I cannot say.

J. M. Hambaugh—I have had no experience with 5-banded Italians.

W. M. Barnum—I really do not know. (The "three-banded" would be the ones *I* would choose, however.)

H. D. Cutting—I have never seen any 5-banded that were any better than pure Italians with three bands.

S. I. Freeborn—I never had any to try, but I doubt their giving any better results than those with less bands.

Eugene Secor—I doubt whether the very light colored bees are better than the darker ones for practical purposes.

Mrs. J. N. Heater—I never had but one colony of five-banded bees, and they were so cross that I superseded the queen.

Prof. A. J. Cook—I do not know, but I do not think that they do. Three good, plain bands on each bee, or every bee, is good enough.

Chas. Dadant & Son—We have never had any success with the very bright yellow Italians. They do not seem so hardy as the others.

Rev. M. Mahin—I cannot tell. I have no five-banded bees. The darker Italians have shown some superiority over the lighter, with me.

J. A. Green—Better and worse. They are not all alike. Some strains are better in almost every way, and some I wouldn't have at any price.

Mrs. Jennie Atchley—As to honey-gathering qualities, I have found but little if any difference when all things are equal, as both are only Italian bees.

R. L. Taylor—Having had the former for the past season only, I am as yet unable to decide, but I have found them terrible robbers, and not gentler than my hybrids.

C. H. Dibbern—I have had but little experience with the five-banded bees, but I have come to the conclusion that aside from their beauty, they are no improvement on the three-banded Italians.

Rev. Emerson T. Abbott—I do not know, but, on general principles, I prefer the darker bees that are evenly marked. I would sell what the people want, and spend no time trying to convince them which is best. They will find this out for themselves. Life is too short to stop and argue the case with every customer who may not agree with you, and then it does not pay.

Dr. C. C. Miller—I suspect that's a good deal like asking whether a bay or a brown horse is better. Breeding for color alone doesn't improve bees, and with care in other directions may do no harm.

J. E. Pond—The dealers in so-called five-banded bees will say yes. I, for one, don't believe it. If you have good queens that produce three-banded workers, you have got as good as there is, and won't gain by changing, in my opinion.

G. W. Demaree—Neither worse nor better. If they are not weakened by in-breeding, they are just as good, but no better for honey. The yellow races of bees are superior to the black races—not because they are yellow, but because they are physically stronger, and capable of doing more work.

Dr. G. L. Tinker—I think favorably of this new strain, and shall use the drones upon my Syrio-Albino stock next spring, as they are similar bees in prolificness and working quality. The five-banded bees undoubtedly contain Cyprian blood, as every queen-breeder who has bred the Syrian and Cyprian bees knows full well.

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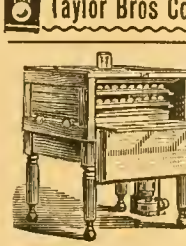

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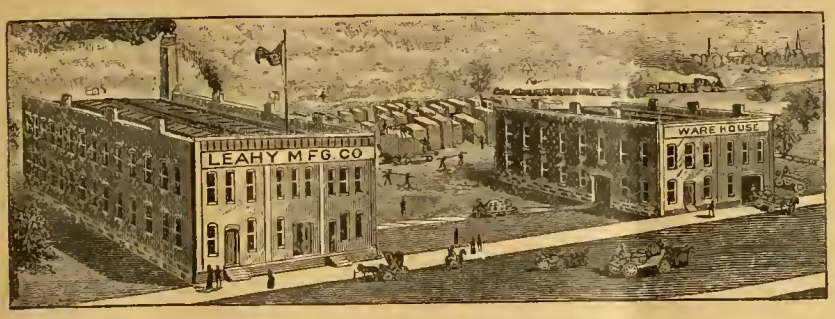

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Heber, Utah, Oct. 9, 1894. J. A. SMITH.

Now, didn't I tell you it would pay to ship Bees north to build up and catch the honey-flow? **Bees by the Pound,** on a Comb and Honey to last the trip—$1.00; 10 or more Pounds 90c. per pound. **NUCLEI**—$1.00 per Frame; 10 or more Frames, 90c. each. Untested Queens to go with them [same as Mr. Smith got] 75c. each.

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Doctor's Hints

By DR. PEIRO, Chicago, Ill.

Inner Soles for Shoes.

The silk side of old "stove-pipe" hats makes very warm inner soles to women's shoes—just the thing for winter wear.

Children's "Nighties."

Children should have warm woolen "nighties" on going to bed cold nights. It is cruel to send them to bed to shiver.

Mouth-Wash for Sore Throat.

A weak tea made from poke-root, fresh or dried, and used as a gargle is a splendid mouth-wash in any form of sore throat.

Acorn-Tea.

Acorn-tea is a fine remedy for diarrhea—especially affecting children in summer. A teaspoonful every hour, a little sugar added.

Emetic for Poisoning.

A teaspoonful each of mustard and salt, in warm water drank down at once, is the best emetic in case of accidental poisoning.

Purifier of the System.

Lettuce and dandelions mixed, cooked as "greens," are not only nutritious, but a good purifier of the system. Eat plenty of them.

Liver Tonic.

Strained raspberry juice with equal part of lemon juice is an excellent liver tonic. Take a teaspoonful before each meal, and on going to bed.

Avoid Wet Feet.

Wet feet should be carefully avoided. Shoes soaked in warm tallow, soles and all, over night, make them wear much better, and are more waterproof.

Quick Cure for Bad Cold.

To quickly stop a bad cold mix a tablespoonful of honey with as much lemon juice in a big pint of water, dusting into this a little cayenne pepper. Drink at once, and keep warm in bed.

Causes Neuralgia and Toothache.

Exposure to a crack in the window or door is more dangerous than a full draft from either. It is the small forced currents of air that more often occasion neuralgias of the face and toothache.

Bath for Aches and Pains.

To make a bath especially effective in case of aches and pains, make a little bag of a tablespoonful each of salt and mustard, turn the hot water on it, and when cool enough jump in for 10 minutes.

Preventing Gall-Stones.

A very small piece of May-apple root, eaten night and morning, is very successful in curing and preventing the formation of gall-stones. Such calculi, when passed, cause excruciating pain, like a terrible colic.

For Scald-Head.

Scald-head in children is best cured by preparing a pint of boiled linseed oil in which a tablespoonful of gum camphor has been dissolved by boiling. Saturate a linen cloth and keep on the head, day and night, until well. A cap can be worn to protect

General Items.

Back from "Sunny Southland (?)."

I came back from the Sunny Southland on Jan. 6, being gone 20 days, and traveled 3,400 miles. "Sunny Southland" is now a misnomer for me, as I saw about 4 inches of ice about 10 miles southwest of Beeville, Dec. 29. My host's banana trees at Beeville "got fits" the night of Dec. 28. I will write up my trip for the American Bee Journal as soon as the report of the bee-meeting at Mrs. Atchley's is out. She may forget something which I can tell.

C. THEILMANN.

Theilmanton, Minn., Jan. 22.

Favorable Season—Banner Colony.

The last was a very favorable season for honey in this part of Colorado. Last spring we had 105 colonies of bees, and harvested 11 tons of fine white honey. Our 209 colonies of bees are in fine condition on the summer stands, where they always do well. They have a flight almost every week all winter. Although the mercury went down to 6 degrees below zero two days ago, the bees can fly to-day.

I have what I think is the banner colony of colorado. I put it into the hive (8-frame) June 10, and in three weeks it filled its hive and six supers. During the season it filled 14 supers of 24 pounds each, making 336 pounds of fine comb honey. Can anybody in Colorado beat that?

J. D. ENDICOTT.

Abbey, Colo., Dec. 28.

Did Better than His Neighbors.

My crop for the past year was a little over 500 pounds of comb and extracted honey. I sold it at 10 and 12½ cents, here at Greenville. My increase was one swarm; it issued the first day of September, and I hived it on drawn comb; they filled up sufficient for winter.

I visited one of my neighbor bee-keepers about 2 miles northeast; he said that he did not get any honey from his bees—28 colonies.

I have another neighbor 2 miles northwest. He got 75 pounds of honey from 15 colonies; and two others, 2 miles west, with 30 colonies, got nothing in the way of honey to amount to anything. Several others are on the same line, so it seems that I am in the best locality, or have managed differently from them.

I notice on page 814 (Dec. 27, 1894) the "boiling down" process. The process may be all right, but I don't think that a man ought to be boiled down so thick that he can't move at all!

We are having some very cold weather now; if it continues long it will be very destructive to the bees in this section, as they are not very well protected from the cold. A. C. BABB.

Greenville, Tenn., Jan. 1.

An Experience with Bees.

My experience with bees is not very extensive, but I have for a number of years had a colony or two. Sometime in the seventies I began with the movable frame, known here as the Champion hive—frames 11x12 inches, inside measure, top-bar 12¾, front end 15½ inches, and rear end piece 13¾ inches, to fit a sloping bottom, set in so as to drop 1¾ inches in front, suitable for the above frames leaving a bee-space below. The upper story, or cap, fits smoothly on the hive, being 9 inches deep, with 8 frames (one a blank or board at one side) for surplus honey. This was a great improvement on the old box. Going on in this way for some few years, until one severe winter most of mine and my neighbor's bees died, and from that until the autumn of 1873 I had only one or two colonies. Then bought 8 more, some of them in the Champion hive, but transferred them last spring to the Langstroth hive. I have now 11 colonies. I took only 65 one-pound sections of honey this year. The season was too dry for honey. I have my hives boarded up on the north, and a roof over them, and packed with straw between the hives and behind them next to the boarding on the north, leaving the front open. I fed three colonies some sugar syrup, thinking they were rather short of stores, and I think now my 11 colonies are all pretty strong, and well supplied for the winter.

GEO. MCCULLOUGH.

Braddyville, Iowa, Dec. 31.

Bees in Good Condition.

Bees are in good condition up to date, although we had a light blizzard here last week. J. B. GRIFFIN.

Cat Creek, Ga., Jan. 8.

Worst in Eight Years.

This has been the worst year for bees in my experience of 8 years. I had 23 colonies, spring count, put 23 into winter quarters, and got about 200 pounds of surplus comb honey. S. C. BOOHER.

Danbury, Iowa, Jan. 5.

Late Swarm on a Stump.

About Nov. 1, 1894, I transferred a swarm of bees from a willow stump, fence hight, and they are all right yet. I winter my bees on the summer stands, with chaff-packed winter-cases. I have 40 colonies in good condition.

I could not get along without the American Bee Journal. J. F. WIRTH.

Rickel, Ill., Jan. 7.

Another Boy Who Likes Bees.

I see in the Bee Journal that Chas. Sanford has written a letter. I have no bees, but I have been working for the Boulder and Weld counties' inspectors the past summer. Mr. Sanford says that they have their bees all in the cellar. It is so warm here that all the bee-keepers have to do is to fill the upper story of the hive with straw or chaff, and leave the hives on the summer stands all winter.

I am thinking of getting some bees and going into the business, as I am interested in the subject. ARTHUR ANGELL.

Longmont, Colo., Dec. 31.

Separate Colonies Working as One.

One of my neighbors has two colonies of bees whose hives are on a stand with a 3-inch space between them, that have worked back and forth just as one colony all summer. Each colony produced one case of comb honey. If any of the old bee-keepers have ever seen anything like it, let them talk out and explain.

Bees did very poorly here this year. I got only 200 pounds from 14 colonies, spring count, and increased to 24.

HENRY SUTHERLAND.

Bainbridge, Mich., Jan. 2.

Season of 1894 in Washington.

I started the season of 1894 with 10 colonies, spring count. They commenced swarming May 17, and on June 6 they had cast 12 swarms—7 out of the 12 absconding after being hived. The hives contained foundation and one frame of brood each. One swarm worked nicely for three days then pulled for the woods. The question is, was I at fault, or were the bees "Coxeyites?" My bees are hybrids, and extremely sharp at one end.

By dividing and by natural swarms, I came out in the fall with 18 colonies, 1,000 pounds of white section honey, and the bees in fair condition for winter. I keep my bees in an open shed on account of so much rain. I have half of them housed this winter, and the rest are on the summer stands without any packing.

The American Bee Journal is a welcome weekly visitor, which is well worth its cost.

THOS. WICKERSHAM.

Wickersham, Wash., Jan. 1.

The Season of 1894.

I could not get along without the "old reliable" American Bee Journal, and I like its last form better than the previous one.

I have 58 colonies of bees on the summer stands, and they are all right so far. Last year I worked 40 colonies, and I got 1,200 pounds of comb honey, and plenty for them to winter on. I won't increase any next summer, as I don't want to overstock my locality. I have sold all my honey down to about 200 pounds, in the home market.

HENRY K. GRESH.

Ridgway, Pa., Jan. 7.

Expects a Good Crop this Year.

The past season was not a good one for honey, but I got some surplus from my 5 colonies. What little surplus I have came from sweet clover. It is the plant for this country. I lost one of my black queens, and sent for a queen from a Texas queen-breeder, and introduced her successfully. Cross they are, but she is a good breeder, and has fine workers.

I expect a good crop this year. White clover is looking fine.

The American Bee Journal is a welcome visitor to our house. My wife and I take much pleasure in reading it.

G. W. HANSON.

Lawrence, Kans., Jan. 1.

Single vs. Double Walled Hives.

I was greatly surprised in looking over a late issue of the Bee Journal, to see so many hands up in favor of single-walled hives. I usually omit reading essays on successful wintering, and the various methods for spring protection, and wondered why the papers were burdened with such stuff. But so long as many readers like to play "freeze out" with those shallow-depth shells, such articles will be in demand. Here in old Pennsylvania, the least of the honey States, where we are forced to feed three or four years in succession to keep up an interest in the pursuit, I have tried the single and double walled hives, side by side, and can say for the former that in a mild winter they do fairly well, but when the old-fashioned winters drop down upon us, we need nothing further to demonstrate the fact that a chaff-lined hive, with a thick chaff cusion, is the key to successful wintering of bees. A. B. BAIRD.

Belle Vernon, Pa.

Experience with Dequeening.

Notwithstanding the poor season of 1894 my honey crop was something more than 40 pounds of nearly all comb honey per colony, spring count. I owe much of this to dequeening, as the new swarms made but little headway in the sections before the dry weather overtook them. I think highly of dequeening, having had three years' experience along this line, and know that more honey can be obtained than by letting the bees swarm, and with less labor and capital; and increase can be controlled just to our liking. And, my! such queens as I can get. I wish I could tell you all about it, but I am no author.

C. H. CHAPMAN.

Cohoctah, Mich., Jan. 7.

[Don't you worry about being "no author," Mr. Chapman. The American Bee Journal is more anxious to publish helpful bee-information than simply brilliant literary productions. I hope every one who has anything good to tell will not hesitate on account of lack of literary education, but just write out what they want to say in the best manner they know how, and send it in. Go ahead, Mr. Chapman, and set some other people a "good example" to follow. Tell all of us how you get "such queens," and about dequeening.—ED.]

Money in Early Vegetables

BY H. W. BUCKBEE.

The question of the hour is, How can I make money? These have indeed been trying times, and the question has been a perplexing one, but I think I have a solution of it, which many of you would do well to follow. As now is the accepted time to begin this line of work, a few timely hints I trust will not come amiss.

My suggestion is this: Put a little time and money into the right sort of a market garden, and supply the large Northern markets with desirable early vegetables.

Tomatoes.—There is money in this very popular and quick-selling vegetable, and if your present line of merchandise does not meet with ready sales, try this line that promises profitable and quick returns.

The wholesale price on early shipments run as high as 25c. per pound on the Chicago markets, but even taking 5c. per pound as an average, I know of nothing that will turn more clean cash, net, per acre. Tomatoes at even 1c. per pound beats wheat at $2.00.

Tomato seed may be sown in hot beds at once and grown in heat until the second leaf appears. Then transplant same into cold frames 2x3 in. apart, and hold in good stock condition till the time for outside planting arrives, take care not to over water, and giving all the air and light possible.

When the time for planting to the open ground arrives, set them so as to admit of horse cultivation both ways, which will save all hand hoeing and other needless expense. They should be given good cultivation while growing.

Shipping.—As Northern markets command the highest price, have your arrangements made with a good reliable commission merchant to handle your produce. The crop should be packed at just the right stage, so as to admit of its carrying properly.

The boxes for packing should be light, neat and attractive. Nothing but first-class stock should be packed. By dealing honestly and furnishing fine stock only, you will stimulate a demand for your goods, for when a buyer can depend upon a grower, his goods will always find a ready market. I would recommend as a few of the best varieties the following first-class sorts: Buckeye State, Atlantic Prize, Buckbee's Tree, Favorite, Beauty and Dwarf Aristocrat.

Radishes.—This is another most profitable vegetable, and from three to five hundred dollars can readily be realized per acre from this vegetable alone.

They mature in from twenty-five to thirty days, under favorable circumstances, and if well grown and placed in Northern markets in January, February and March, they will find ready sales. Some of the finest varieties are as follows: Rapid Forcing, a fine scarlet turnip variety, which matured in twenty days on our Rockford Seed Farm the past season; Rosy Gem, a most beautiful white-tipped scarlet turnip variety, matured under same conditions in twenty-three days after planting. Then comes the famous Chartier, a white-tipped, long, scarlet, which is a great favorite wherever grown.

The seed may be sown in drills ¼ to ½ in. deep, with a distance of 14 to 16 inches between rows, so as to admit of hand cultivator, which every gardener is supposed to have.

The ground must be rich, so that this vegetable may be grown as rapidly as possible. Give same careful attention to packing and shipping as mentioned above, and you will be repaid for your labor a hundredfold.

Limited space prevents my writing of numberless other vegetables that, handled with the same careful attention, will yield equally as good results.

Here is success to you the coming season.

Rockford Seed Farms, Rockford, Ill.

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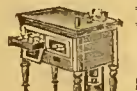

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Contributed Articles.

On Important Apiarian Subjects.

Cellar Wintering with Chaff Hives.

BY G. M. DOOLITTLE.

Not long ago, a bee-keeper called and requested that he be allowed to go into the bee-cellar to see how the bees were wintering in there. Upon looking around and seeing many of the colonies having masses of bees hanging below the combs, similar to a swarm in summer, he was surprised, and seeing that most of the hives in the cellar were chaff-packed, he wished to know if I did not think that the bees were protected too much in these hives. I said "no." He seemed to think that having bees in chaff hives when wintering in the cellar, was very much like a man keeping his overcoat on when in the house, thus inferring that the bees were too warm, and that this was the reason they hung down below the combs so, yet he was compelled to admit that he never saw bees as quiet, when in the cellar, as were these very bees he was looking at. My idea of the matter used to be the same as his, until I began to experiment to find out the truth. After these experiments I am prepared to say that bees will winter better in the cellar if in chaff hives, than they will in single-walled hives, providing they are fixed as they should be in the cellar. The experiments conducted were as follows:

One season, several years ago, I had some quite weak colonies, formed by uniting nuclei late in the fall. They were in chaff hives, as I had intended to winter them out-doors; but after all the rest of the bees were in the cellar, which I had intended to put in, I found that there was considerable room left in the cellar, so I decided to try a part of these small colonies in chaff hives, by putting them in the room left, for I feared they would not go through the winter where they were. Accordingly, I put some six or seven of them in, two of which were placed in the cellar just as they stood out-doors—*i. e.*, the bottom-board, cap, and chaff or sawdust cushion were all carried into the cellar, with no means provided for ventilating the hives, save what air would go in and out at the entrance. Two others were left the same as out-doors, save that the cap or hood was left on the summer stands. The remaining ones were raised from the bottom-board some three or four inches, by way of putting two sticks of ordinary stove-wood between the bottom of the hive and the bottom-board, one on either end of the hive, the cap being left out-doors the same as the last.

That the reader may better understand, I will say the chaff, or fine straw (I prefer the latter), is about four inches thick on all sides of the hive, while over the tops of the frames I use two thicknesses of common cotton-cloth, preferring that these pieces of cotton-cloth be free from propolis, although not all of them are so. Over these pieces of cotton-cloth I used a sawdust cushion, which is nearly as large as the whole top of the hive, this cushion coming out well over the straw on all sides, thus making it impossible for a current of air to pass rapidly through the hive, or for the bees to get above the cotton-cloth out into the tops of the hive, or into the hive above. This sawdust cushion is of about the thickness of the straw at the sides, and being of fine, dry, basswood sawdust, it is capable of absorbing nearly its bulk of moisture before it becomes wet to any appreciable extent.

Now for the result: On putting the bees out in the spring, I found both of those dead which were put into the cellar the same as they would have been had they been left out-doors; one dead and the other weak in condition, of those which had only the entrance of the hive for ventilation, but had the cap left off; while those raised from the bottom-board on sticks of stove-wood were apparently in as good condition as they were when put into the cellar the fall previous. Seeing the success attained by these last, I thereafter commenced to put more colonies which were in chaff hives into the cellar, so that the present time finds ⅞ of all my bees in chaff hives, ¾ of which are in the cellar, all raised at the bottom and fixed as above.

G. M. Doolittle, Borodino, N. Y.

I have just been in to see them, so that I might tell the reader the difference between these and those in single-walled hives. Those in the single-walled hives are clustered closely on all parts of the cluster, bottom, top and sides, the same as they would be out-doors, only not quite so completely; while those in the chaff hives are clustered just as closely as the others at the bottom of the cluster, and a little way up the sides; but as you come toward the upper half of the colony, the bees stand out around on the combs the same as they would in summer, while at the top, all along next to the cushion and cotton-cloth, they make no pretension at clustering whatever, although you can look at them a long time without any of them stirring, no matter how close you hold the light to the hive. In this way they have free access to all parts of the hive, so a colony never starves, as long as there is any honey in the hive, by their eating the honey from one side and failing to move over, as is frequently the case.

But the greatest item of the whole is, that these colonies in chaff hives do not consume nearly as much honey as do

those in single-walled hives, while the safety of their wintering successfully is more fully assured; for the less honey consumed by a good colony of bees insures their more perfect wintering. Where hives are wheeled right into the cellar, as I do mine, the labor of putting them in is little more than with single-walled hives, and this labor question is all there is against the matter, except that a less number can be put into a given space, and the saving of honey, will, I think, more than compensate for the extra room needed, and pay for building a little larger, where it should be necessary.

Borodino, N. Y.

Making Hives—Full Sheets of Foundation, Etc.

BY R. S. CHAPIN.

As asked by the editor, I will contribute my share to the American Bee Journal, which will perhaps be of some value to beginners.

I make all my hives, frames, supers, etc. I have a foot-power sawing machine, which I constructed myself, to help me on in such work. I have it so I can screw the table up any desired height for the purpose of doing rabbeting.

My hives are made to take eight Langstroth frames, which are 9⅛ x 17⅝, top-bar 19 inches. The hives are made from one inch lumber, well seasoned. The body of the hive is just 18 inches long, 12 inches wide and 9⅛ inches deep, inside measurement, with no bee-space above the frames. An entrance, 5 inches long and ⅜ deep is cut in the bottom edge of one of the end pieces. There is also a ⅜ inch bee-space below the frames. There is a ½ inch rabbet at the top of the outside edge of the side pieces to the hive, bodies and supers. The lower inside edge of the side pieces to the supers, has a corresponding rabbet (the side pieces of the supers are made ½ inch wider than the end pieces for this purpose) which projects into the rabbet on the hive body. These rabbets keep the super from being misplaced in any way, and allows of tiering up. I have not yet found any objection to these rabbets, except the trouble of making them. The corners of the hive bodies and supers, are also rabbeted, and nailed both ways, which makes an extra strong corner, and I think equal to the dovetailed. The bottom-board is made 3 inches longer than the hive bodies, to form an alighting place. There is a cleat nailed on the under side of each end to prevent it from warping.

The cover is made from one whole, sound board, and ¼ inch larger each way than the outside dimensions of the hive. There are 2-inch cleats nailed all around the edge of the cover to keep it from warping, and also to keep it in place on the hive. The ¼ inch extra size, is so it will not work tight on the hive, because you know we must have no jarring around the bee-hive.

The super is just 5¾ inches deep, made to take the section holder arrangement. The section-holder rests on little cleats, ¼ inch square, nailed to the lower inside edge of each end piece. This makes a ¼ inch bee-space below the section-holders and none above.

I use separators and full sheets of extra thin surplus foundation. This secures full, even combs of honey in the sections. When one super is nearly full I raise it up and slip an empty one under it.

The top-bars to the brood-frames are 1 1/16 inches wide, and ⅞ inch thick, with a saw-kerf in the center of the under side, for the purpose of fastening in foundation. I use full sheets of heavy brood foundation in wired frames. I would not dispense with wire when full sheets are used, for many reasons. Of course it is quite a bit of trouble putting the wire in. I pierce 4 holes through each end-bar. The first one about 1 inch from the top-bar, and the last one 1½ inches from the bottom-bar. The remaining two holes are at regular distances between these two. The wire is laced back and forth through these holes and held at the ends by a small tack. The wire holds the foundation in the center of the frame, holds it from sagging, and holds the comb from breaking down when extracting, or at other times.

FULL SHEETS OF BROOD FOUNDATION.

The value of full sheets of brood foundation, in my estimation, is far greater than the cost. The principal object is that it secures straight combs. Using full sheets is the only way that straight comb will be built clear down to the bottom-bar. It also prevents the wholesale breeding of drones. Another good reason is, that when a new swarm is hived on full sheets, the queen can go right to laying without having to wait for comb to be built, and there is also a chance for all the workers to commence at once, which they cannot do when they have to commence on the top-bar without foundation.

WINTERING ON THE SUMMER STANDS.

I winter my bees in chaff hives on the summer stands, and practically without loss. I make the winter hives of ½ inch lumber, 3 inches larger, on the inside, all around, than the outside dimensions of the summer hive. The chaff hive is just 17 inches deep on the inside. It has a gable cover which is covered with roofing-tin. It has corner posts made from 1 inch ash lumber. The sides and ends are nailed to these corner posts with No. 4 shingle nails.

To pack for winter I put 2 inches of chaff in the bottom, set the hive in, and put a super on. I then put a bridge in over the entrance, and pack chaff in all around clear to the top of the super. I then put a Hill's device, of my own make, on top of the brood-frames, and on top of this is put a chaff cushion. The summer covers are all left off.

I have yet to find out what plan of wintering is better than the above for this locality.

Marion, Mich.

Mr. Abbott's "Notions"—The "Dovetail" Joint

BY DR. C. C. MILLER.

Brother Abbott is out with his war-paint, anticipating in advance that bee-keepers would be "hopping onto his notions" as they are developed in his series of articles. I don't care to "hop" a great deal, but "take my pen in hand to inform" him of a few points in which I think some may not agree with him.

As to the kind of joint for a hive, he seems a little out of joint. It is entirely true that the so-called "dovetail" joint is not dovetail at all. By the way, will some one please arise and tell us what is its right name? Is it "fingered" or what? But, Bro. Abbott, will you please explain why you object to the name dovetail, after it has come into general use in all the books, catalogues and papers? Haven't you been using it in just the same way ever since the first sections were made? And yet I never heard a word of objection to it until it was used in a hive? Why didn't some one give us a picture of a true dovetail years ago when dovetail sections were first made?

You say that a true dovetail joint when it is once in place "could not pull apart very well if it did not have a nail in it." I am somewhat familiar with true dovetail joints, having made and put them together in boyhood, and if they are not nailed they are just as easily pulled apart as the kind used in sections and hives, only they will pull apart only in one direction.

If I have counted straight you raise three objections: difficulty of making square; unequal shrinkage; cracks for water to get in. I am a little surprised at the first objection, for having a number of such hives I found it possible to get every one of them put together square, whereas with a common joint or a halved joint, if the stuff is not cut exactly true it is much more difficult, indeed almost impossible to make a square joint. With one of these last joints, if you don't get everything exactly square before the whole thing is put together there is no remedy. With the dovetail you can put the hive together, try it with a square, and if it isn't exactly square you can push or knock it square, and then you can nail it there. At any rate, I have halved-jointed hives in large number, and I don't think they are as true as the dovetails.

The chance for unequal shrinkage is objectionable, and on that account I would never allow the stuff to lie a year without being put together. If put together before any chance for shrinkage, I don't know that there is likely to be any trouble. The unequal shrinkage of two pieces of wood, each an inch wide and an inch thick, is not likely to make a split.

As the corners of a hive do not give out first, I don't suppose there is danger that water getting into cracks will make any great trouble.

The dovetail corners have the advantage of the halved joint that they are cross nailed, with this substantial advantage that part of the wood being twice the thickness heavier nails can be used without danger of splitting. Besides, you can make a surer job of having them square. In fine, the dovetail joint is the strongest joint made, if I am any judge of such matters.

Now if all others were out of hearing, and just you and I were alone, I'd say that I think the halved joint is a really good joint, and if you like it best there's no law against your using it, but you have such a way of vigorously denouncing everything that doesn't entirely agree with your "notions," as you call them, that a beginner reading these articles, and,

supposing that they were of standard authority, would be led to think that some of the things that were generally agreed upon by the best bee-keepers were things to be carefully avoided if any degree of success was to be had. Now I don't believe it will make an iota of difference to the bees or their work as to what way the corners of the hive are fastened together. But the beginner, reading your article would be likely to put down—Mem: Mustn't have dovetail joints if I want to get any honey.

Of course you have a right to use beveled joints between the stories of hives, but it seems a pity to have that recommended to beginners when it has been so largely discarded by its former friends. The same thing may be said as to loose-hanging frames, but as you don't express yourself very fully on that point perhaps you don't mean to approve them.

On the whole, I like your vigorous way of expressing yourself, but, for the sake of those who are looking up to you for guidance, I wish when any of your opinions run squarely athwart those of men whose opinions you and I respect, you would just label such opinion—"This is one of my notions." Marengo, Ill.

The Production of Extracted Honey.

The third in a series of articles on the subject.

BY CHAS. DADANT.

Before the invention of the pound section, and of the honey-extractor, among other methods, I used mainly boxes with suspended frames six inches deep, hanging lengthwise of the hive, but divided into two parts united together by the top-bar and which could be separated instantly. These half frames, when full of honey weighed about three pounds each, and we used to pack them in crates with glass at both ends. At that time our main sales were made on the St. Louis market, and I used to accompany the crop by boat; the Packet traffic being much more important then than it is now, my shipment was usually much admired by the passengers, and I, several times, sold quite a great deal of honey to the captain and officers of the Packet.

When I began producing honey for extracting, I found these 6-inch supers very convenient. I filled them with old drone-combs, of which, every spring, we had a quantity to render that had been removed from the brood-chambers of different hives, or that were cut out in transferring bees in box-hives to movable frames for we used to buy box-hives of bees, every spring, to replace the colonies of Italian bees in movable-frame hives that we sold every season.

The reader will notice that we have always made it a point to remove the drone-combs from the brood-apartment, as much as possible. This may be done most readily when transferring bees, whether from box-hives or other hives, as all the combs are handled one after another. This is a matter of great importance in practical bee-keeping.

Most of the drone-combs that we thus placed into our surplus cases are now good yet, I could say that they are even better to-day than formerly, as they have been filled and emptied so many times that their dark cells have been brightened up by the trimming of them with the honey-knife, and the reiterated repairs by the bees. During these repairs, the bees constantly add to their strength, so that a comb, no matter how many times it has been filled and emptied, becomes constantly better and stronger for extracting purposes.

There is however a drawback to the use of the drone-combs even for supers, it lies in the fact that they afford an unprofitable chance for the queen to deposit drone-eggs, during an irregular honey season. During a good and strong honey-flow, the bees usually fill these combs with honey almost as soon as they are placed on the hive; but if there is a succession of several rainy or cold days—in short, if the honey crop is irregular from some cause or other, there is some danger that the bees may empty some of these combs, and that the queen may visit them and fill them with eggs, thus producing a number of undesirable idlers. For this reason, it is better to fill the frames of the supers with comb foundation, or worker-combs.

At the time when we began extracting, comb foundation was not yet in use, and good worker-combs were too valuable in the brood-chamber to be recklessly used in the supers. That is why we made use of these drone-combs; but we are slowly replacing them with worker-combs in our apiaries, though we must acknowledge we are somewhat reluctant in breaking up combs that have done such good service for 20 years or more. Some of these combs have certainly been run through the extractor 40 or more times.

These shallow 6-inch frames proved as good as deeper ones, if not better, yes, I will say better than the latter. Bees are more speedily driven from a shallow super than from a deep one; the combs are more readily handled; there is less chance for brood in the honey-combs, for they dislike to place their honey far from the brood, and as they usually begin filling from the top, they will often breed in the lower part of a 9-inch frame that they have begun filling with honey, even if they have to forsake the lower story for this. A shallow frame being quicker filled, if another story is needed and placed on top of this, there is but little danger of the queen laying eggs in the latter, as it is then separated from the brood by the already filled 6-inch frame, and the queen scarcely ventures that far from the cluster.

The reader will thus see that these shallow supers agree better with the bees' instincts than the tiering up of two or three full frame stories.

During the first years, I used to extract honey from the brood-combs of the hive, but I soon found that such a practice was attended with a great many inconveniences. The supers containing surplus honey may be removed from the hive very fast—faster, in fact, than a single comb from the body, so the bees are less disturbed or excited by the removal of a whole upper story than by the selecting and taking of a few combs out of the brood-apartment. The hive not remaining open long during the removal of the super, very few robber-bees are likely to enter it, if there are any about, and most of my readers doubtless know how they follow the bee-keeper when he opens the hives during a time of scarcity of nectar in the flowers, as is usually the case after the honey crop. Therefore, all risks of robbery are avoided.

Whenever we extracted from brood-combs, and notwithstanding the greatest care, we have always seen a few larvæ displaced, and even thrown out of the combs and floating above the honey; the milky food, on which they were lying, being also mixed with the honey, if the cells of brood were unsealed. True, one may extract honey from brood-combs without such accident, if the honey be not too thick, but there is always some danger of this annoyance.

When combs containing brood are emptied they must be returned to the hives without delay, because the bees are greatly disturbed by that empty space in their brood apartment, and also because the larvæ might suffer from the temperature, which is lower in the air than in the brood-nest. Supers without brood are not subject to these inconveniences, and may be retained till evening, or even till another day.

We have also noticed that, when the white honey of the June crop is left in the hive, the bees winter better upon it than upon the darker grades, for this white honey is less mixed with heterogeneous elements than the dark honey of autumn, and especially than honey-dew and fruit or sap juices. It is therefore preferable to sacrifice a small quantity of merchantable honey, to obtain a better wintering of the bees, by leaving it in the brood-combs.

As perhaps some of my readers are not fixed upon this question, of the quality of the food in wintering bees, I will say that it is the importation of bees from Italy which has demonstrated to me the influence of this quality, on their health, during a long confinement. For several years I imported queens from Italy without success. They were sent in small boxes containing comb honey, and, most of the time, they had died, after soiling the inside of the boxes, as bees do too often after a hard winter. The difference in the quantity of excrement and in the odor of it, when a part of the bees had arrived alive, led me to ask my shipper (Giuseppe Fiorini), to supply parts of each shipment consisting of 26 queens, with different grades of honey and with syrup made of good sugar. The result was, as I had anticipated, that the boxes containing white honey, or sugar syrup, had lost but few bees, while those that were supplied with dark honey, heath honey especially, had lost all, or nearly all the bees; in some cases the queen alone remaining alive on arrival. Some of the healthiest looking lots were preserved by me for experiments, after the queen had been removed, and some of the bees in these were still alive six weeks later. This experiment demonstrates that the poor quality of honey is one of the main factors in the loss of bees during long winter confinements, and that it is a good precaution to leave in the hives all the spring honey that is contained in the brood-chamber, instead of extracting it, and to keep the emptied surplus cases on the hives to store the fall crop, if any be gathered. The difference in price between the two grades is largely compensated by the better wintering of bees.

My readers will bear in mind that we use large hives; a surplus box covering only eight frames being altogether too small to contain the average harvest of a strong colony, when this surplus box is only 6 inches deep. Small hives are enlarged by piling up two or three full stories one upon another. We have said why we disliked them. Yet some bee-keepers,

and very practical ones, succeed with them; witness our friends E. France and Son, of Platteville, Wis. But we have tried their way and we prefer ours. Our large Quinby hive, containing 10 frames, being nearly as large as two eight-frame regular Langstroth hives, our method does not require so much work, especially since the invention of the bee-escape, which cannot be used when there is brood in the surplus box, as is almost always the case in full-story supers; for the bees will not desert the brood. Hamilton, Ill.

(To be continued.)

Report of the Michigan State Convention.

BY W. Z. HUTCHINSON.

The dozen or so veterans that gathered in the parlor of the Perkins Hotel, Detroit, had a good, social time, and discussed the topics laid down in the programme, and those other little side-issues that crop out and often prove the most interesting part of a convention, but there was no crowd and nothing conventional. It is evident that the financial and apicultural depression has a depressing effect upon our conventions.

The forenoon of the first day (Jan. 2) was spent in chatting, recalling old times and building castles in the air. At 1:00 p. m. President M. H. Hunt called the meeting to order, and Hon. R. L. Taylor, of Lapeer, read the following essay on

Apicultural Work at the Experiment Station.

Since this Association a year ago saw fit to appoint a committee to assist in directing the apicultural work of the station, it is fitting, if not to be expected, that I should make at this annual meeting something of a report of the operations in this line under my charge.

It is with serious regret that I have to report that the character of the season has been such as to greatly interfere with the making of many of the experiments projected, and in several cases prevented their execution altogether. Of this latter class were all those that depended upon a considerable amount of swarming—such as the comparison of the amount of work done by natural swarms with that done by made swarms; the comparison of the advantages of comb, comb-foundation and starters in hives used for the reception of new swarms; and the trial of hivers and non-swarmers.

The experiment for the comparison of starters, foundation and comb was made in the season of 1893, but for several reasons besides the one that no single experiment in such matters should ever be taken as final, I greatly desired to repeat it under a set of circumstances that experience and further thought have suggested, such as to give promise of something more nearly approaching a crucial test. The impossibility of carrying out the intended comparison of natural with made swarms was a disappointment, as the comparison seems to give promise of something of much value to many in the management of an apiary.

There was some swarming in the apiary, but not sufficient to furnish swarms that could fairly be compared, since intelligent work requires the issuing of several swarms at or about the same time; besides this, the yield of nectar was so exceedingly light that the experiment, even if swarms could have been had, would have been rendered abortive. Some of the experiments which were actually carried out would no doubt have yielded results of greater value had the season been more favorable in the particulars here referred to.

STIMULATIVE FEEDING AND SPRING PROTECTION.

The first new work that engaged my attention at the opening of spring was experiments designed to test the value of stimulative feeding and the value of special protection in spring. A most thorough and comprehensive experiment was planned and carried out, with the purpose of getting some results, if possible, that might serve to help clear up the mystery that seems to envelop these subjects. About 70 colonies were taken, and as the two experiments could be made on the same set of colonies without any sort of interference, there were practically about 70 colonies used in making the experiment upon each of the two matters referred to.

A large proportion of the colonies were carefully packed with saw-dust, on their removal from the cellar, and a portion, both of the packed and the unpacked, was regularly fed during the settled weather of spring, when there was no nectar to be gathered, up to the time of white clover bloom. The most careful efforts were made to know at the outset the weight and numerical strength of each colony included in the experiment and to note the rate of increase in each of these particulars from time to time as the exigencies of the experiments seemed to require, up to the end of the clover and basswood honey season. This course gave data from which it seemed to be mathematically demonstrated that for that season the advantage of stimulative feeding was very slight, I might say trifling, while the sawdust packing was a very serious disadvantage.

FOUNDATION FROM FOUL-BROODY COMBS.

An experiment was made which is deemed of considerable importance to determine whether foundation can be made from foul-broody combs, by the use of such a low degree of heat as to leave the foundation still infected with foul brood germs, and so the possible means of conveying the disease to healthy colonies. The highest degree of heat to which the wax was subjected in any part of the process of rendering and sheeting it was 180° Fahr., and that was for a comparatively short time during the rendering of the wax in a solar extractor, so that only a small proportion of it at any time could have felt that degree of temperature, and much of it was at no time warmer than 160° Fahr. The result was that in each of the two colonies furnished with this foundation one cell of unmistakable foul-broody matter was found, though it seemed to differ somewhat in appearance from that having the usual malignant character. The foundation was not completely drawn out, and will be carefully watched for further developments.

DIFFERENT "MAKES" OF COMB-FOUNDATION.

The more important of the other experiments so far made were those by which an attempt was made to test the qualities of different makes of foundations designed for use in sections for comb honey. One test was for the purpose of determining the comparative readiness and rapidity with which the bees did their work on each kind; and one was to determine the comparative thinness to which the bees would work the septa of each kind. All these experiments were successfully and satisfactorily made. Others of less importance it is unnecessary to mention here.

WINTERING BEES IN CELLARS.

An earnest effort is making during the present winter to throw, if possible, some light on the questions which arise relating to the wintering of bees in cellars. The question relating to the effect of moisture on the wintering of bees is given prominence. A number of colonies are placed together and are kept enveloped in cloth continually saturated with water, and some colonies are given plenty of upward ventilation, while others have none at all. If moisture has such a deleterious influence on the wintering of bees as is sometimes claimed, it is confidently expected that these experiments will disclose some of its effects with certainty.

These brief outlines will serve to give a bird's-eye view of the work that is being undertaken at the station.

What of the coming year? Shall the work be continued on the same or similar lines, or shall it be varied? and if so, in what direction and to what extent? This is of course, on the assumption that the work at the station is to be continued. But of this we have no guaranty. It is indeed the most unpleasant characteristic of this work, that its tenure is very uncertain. Perhaps it may not be possible to do away altogether with this uncertainty, and if it is not, then it must continue to be as it is and has been, that the bee-keepers of the State will have to be vigilant and active if they mean to secure the continued recognition at the station which the importance of their vocation warrants. We have been accustomed to contemplate with pride the position which our State has held among apicultural communities. It has been her won't to be at the front; shall she, because a Cook has gone, be suffered to lose that position?

This is written without reference to the question of who shall perform the work. Close contact with the work has not only magnified the importance of it, but has also revealed the burden of the labor and care necessary to do it well. The small stipend, now granted, by itself would be small inducement to a competent person to carry the burden. The stipend should be increased so that the work might be extended without compelling the operator to carry a gratuitous load.

By asking this, we ask nothing that our vocation does not deserve. Apiculture lives not to itself. Its product constituting one of the most healthful of foods, and at the same time so delectable as to be a luxury, is sure gain, being secured from what would otherwise be waste only, and it may be that this gain is but an incident to its greater bounty in causing plant and tree to yield abundantly their seed after their kind.

R. L. TAYLOR.

Mr. Taylor's essay was then discussed as follows:

M. H. Hunt—In order to have this work continued, must it be looked after each year?

R. L. Taylor—Yes, it is necessary. Each year the work is mapped out and money apportioned for this and for that, and unless bee-keepers show very clearly and emphatically their needs, they are likely to be left out. This Society should pass a resolution upon the matter and lay it before the Board; besides there should be some letters written to the members of the Board.

It was moved and carried that the Secretary draw up a set of resolutions similar to those of last year, and forward them to the chairman of the Agricultural Board.

FOUL BROOD IN COMB FOUNDATION.

W. Z. Hutchinson—Do you not think, Mr. Taylor, that the cell or two of foul brood in the colonies given the foundation made from foul-broody combs might not have come from some infected colonies in your yard? I suppose you have some yet.

Mr. Taylor—So far as I know I had no foul brood in the apiary. I am satisfied that it was foul brood, but I am not so sure that it was sufficiently virulent to be propagated. It was not exactly like the real virulent foul brood.

Mr. Hunt—As foundation is usually made there is no danger. The heat is either greater, or else it is longer continued.

Mr. Taylor—I grant that, but this experiment was made to see if it were possible to render wax and make foundation at so low a temperature that the germs of foul brood would not be killed. If it does not show next year—is not strong enough to propagate itself—we may rest assured that foundation never contains germs of the disease.

Next, Mr. Hunt read the following:

The President's Annual Address.

Since last we met, another year has been added to the existence of our State association, and it will be remembered as one more fruitful in failures than otherwise. We have not even had the solace of high prices with our short crops. Perhaps we have fared nearly as well as those of other pursuits, for it has not been "all pie" with the farmers and merchants. The drouth that shortened the honey-flow also lessened the farmers' crops, which in turn affected the merchants.

We gain some knowledge in a season like the past one that we would never get in a good one, and if taken proper advantage of will be of benefit to us when Nature is more lavish in yielding up her treasures.

SELLING HONEY AT RETAIL.

At the end of the season I found I had nearly one ton of white comb honey and about 600 pounds of extracted. This small crop I determined to sell at the very best advantage, that is, get as much as possible for it with the least trouble.

I found a person out of employment, whom I thought would make a good salesman; furnished him horse and suitable wagon, giving him half the profits, making the wholesale price the base to figure the profits from. He commenced selling on the eastern and western markets of this city (Detroit) the latter part of August—selling either in packages or bulk, as the customer might wish. Our little crop went like magic, and we have since bought and sold about five tons.

A set of scales that adjust the tare we used to weigh the pails, crocks, etc., that come to be filled. By having regular days, the customers soon learn when to come, and they rarely fail to bring a new customer along.

The groceries are supplied with pint and quart Mason jars, and jelly glasses holding ¾ of a pound; the latter sell at 15 cents each. The jelly glasses are made tight by dipping the top in melted beeswax and tallow; the honey is put in hot and immediately sealed up. This is our first season's experience with the jelly glasses, owing to the difficulty in preventing their leaking, but by the above plan they are perfectly satisfactory, and the cheapest package we know of, only costing about 2 cents each.

The result of our experiment has been satisfactory; the man employed got a living for his family, and left us much better than the wholesale price for our honey; and also established a business that will be an outlet for a good many tons of honey in after years. M. H. HUNT.

Mr. Hunt's address was followed by this discussion:

Chas. Koeppen—Did you put on cautionary labels in regard to the candying and re-liquifying of the honey?

Pres. Hunt—We did not. When honey is sold in small quantities to families it is consumed before it candies. When sold in glass to retail dealers we always take back any that candies, and give new packages that are not candied, and the candied honey can be easily liquified by putting it in a warm place. When we sell it in 60-lb. tins we always give instructions in regard to the candying and the liquifying.

Mr. Koeppen—I have retailed my extracted honey by putting it in lard-cans furnished with molasses gates. The cans and contents are weighed when they are left with the dealers, and the next time around they are weighed again and the dealers pay me for what has been sold.

Next came an essay from Mr. T. F. Bingham, of Abronia, on

Influence of Patents on Improvements.

The thousands of patents granted by the most progressive nations may be regarded as evidence of their value in national and private advancement. No nation has such a complete patent system as the United States; and no other nation has ever added to the world's wealth of conveniences so much in the same space of time.

While thousands of men may move in the same society, and among the same people, having the same or similar needs and desires, not many among the thousands are inventors. Generally speaking, people do as they have been taught, and do not add to or diminish the wealth or happiness common to their ancestors. Occasionally, however, some artisan, not unlike others in environment, conceives a different plan by which a certain end can be more readily attained. It is here that the patent laws come to the aid of invention. They say to the inventor: Proceed with your experiments; perfect your invention; take out your patents, and continue your improvements. Never rest from your labors until your invention is absolutely perfect.

It is true that some people, in other respects worthy, cry out against patents. We are not called upon to discuss the reasons of their cry. It has been discovered that politicians often take up the cause of the people before election.

By securing a patent on a valuable invention, the consumer is placed in a position where he can be sure of getting the best of the kind at a reasonable price.

A patent may, or may not, be of much value. But in this age of patents, it is safe to say that any machine claiming to be an improvement or an invention—which the inventor does not patent—does not have any valuable patentable features. The undisputed evidence of an invention is the record of the Patent Office.

How often do we see valuable space taken up even in bee-papers with the contention, "Who invented it? Who was the first to suggest it?" Suggestion is not invention. One may ask questions he cannot answer. The inventor is he who joins thought with Nature's forces, and patiently and persistently works out a process, or constructs a machine.

To save contention, and secure the credit due a valuable invention, and conserve the interests of the innocent consumer, every invention should be patented.

T. F. BINGHAM.

Mr. Bingham's essay was then discussed as follows:

L. A. Aspinwall—There are many small inventions that are patented and thus protected in their manufacture, to make them better and more cheaply than they could do if some Tom, Dick or Harry could step in with a cheap imitation.

Mr. Taylor—Mr. Root, has, I believe, abandoned his opposition to the patents.

Mr. Hutchinson—He has always believed in rewarding invention, but when there was no patent, Mr. Root was the one to say how great should be the reward; when there is a patent, it is the inventor who dictates the terms.

(Concluded next week.)

Early Queens the Best.

W. W. GRAVLEE.

Every consideration, perhaps, that must be observed in order to secure the highest development of the queen-bee has been given in the last two volumes of the American Bee Journal. Yet I have seen no statement as to what influence the different seasons exert upon her majesty's development and future usefulness. Are early queens—those reared about the time of early swarming—better, other things being equal, than those reared later in the season?

Against an answer in the affirmative it may be urged that it is difficult to determine. So many things are beyond our control, that we cannot know just when they are all equal. Queens from the same lot of cells vary. Some bees will probably rear better queens than others. The location and the season have something to do with the result. So I suppose we shall have to content ourselves with a comparison of the actual products of the two classes of queens.

However, some such theories as the following might be advanced in favor of early queens: Spring seems to be the most favorable season for the young of many insects and animals to obtain a foothold upon life. And those that begin their existence during this season are supposed to possess, on an average, more vigor than the ones of other seasons. Farmers want spring colts, fanciers early birds for their breeding pens. If this be true largely with animals, surely bees are no exception. I think the effect should be more marked with them. For then, they bend their energies to brood-rearing—later, to honey-gathering.

Now, every bee-keeper, I presume, has been enchanted by their gladsome hum and tireless industry—had cares driven away, and purer thoughts and nobler actions inspired. Do you not feel some such sensations to a degree somewhat proportionate to the activity displayed by the bees? When is this activity greater than at swarming time? Now, who will say that bees do not generate a large amount of magnetism, or electricity, if you prefer, when their nerves are strung to such high tension—that is, transmitted to their attendant, as from one person to another? How else do you account for the buoyant feeling and increased energy when working with them at certain times? Don't say it is all excitement. Here is probably the charm, aside from the money there is in bee-keeping, that holds most apiarists.

Now this electricity, or nerve force, is the source of life and power. Is it not reasonable to suppose that the development of the queen's nervous system, so to speak, depends largely upon the amount of energy in the hive during the first stages of her existence? Whenever we can get the greatest energy and nerve force properly directed, we shall secure the best queens. We can secure physical development almost any time, but we cannot obtain the strong nerves and their attendant energy at all seasons.

But facts are what we want. "One fact is worth a thousand theories." Yet a few colonies for only one season hardly furnish a safe guide, and this is about as far as my observation extends along this line. The queens that I shall here take notice of were reared the previous season—the early ones in April, artificially; the second lot in June, by natural swarming; the third in August, artificially. They are all from the same queen. The best early one gave over 200 pounds of honey; the best late one about 50 pounds. There was but little difference between the June and August queens. The total average was about 4 to 1 in favor of the early queens. They also gave an increase of 25 per cent., while the late ones gave none. The season was such as to put them to a severe test. During a favorable season I think the difference would be much less, probably very small. But we want bees that will give us a crop in just such years as the past one.

So, early queens seem to be more vigorous, more prolific, and longer lived than later ones. Hence they give us stronger colonies of hardier bees that are longer lived, and more energetic workers, which in turn give larger crops of honey.

I shall be glad to hear from others on this subject. With my present knowledge I shall be slow to follow Mr. Simmins' advice—to use only fall queens. Newtonville, Ala.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

A Plan of Dividing Colonies.

Mr. Go-he has a very strong colony of bees, which he wishes to divide in the following manner: Dividing the combs and bees as nearly equal as possible, leaving the old queen with one-half, and putting a virgin queen with the other half, using two new hives, and locating them not farther than six feet apart. Will the virgin queen hold her colony? Will either swarm out or abandon the brood and hive?

Belden, N. Y. C. G. M.

ANSWER.—A good deal depends upon circumstances, especially as to how the colonies are placed, and what surround them. If the part with the virgin queen is put farther from the old stand than the other part, or if any colony is nearer the old stand than the hive with the virgin queen, then you may count on all the bees deserting the virgin queen except the nurse-bees, or those under 16 days old. Indeed this will be the case whether they have the virgin or the old queen. In neither case, however, are they likely to abandon entirely the hive, for these young bees will stay with the brood, even if they have no queen at all. There will be less desertion from the old queen than from the virgin, and if a virgin queen of too great age is given immediately on making the division, the bees will be likely to kill her. Either give a virgin queen not more than perhaps 12 hours old—younger might be better—or else leave the bees queenless 24 hours or more before giving the queen. On the whole, you may not like the plan so very well, still it is practiced by some.

The Botanical Name of Cat's-Claw.

I am further indebted to Bro. Abbott for the use of his sharp eyes in finding names. A postal from him says:

I could not give up the hunt for cat's-claw, and I finally found it. It is local, mostly in western Texas, and belongs to the Pulse Family, which furnishes most of our honey-plants. It is *Acacia Greggi*, and by some is known as *A. Wrighti*.

We are having very fine weather. Had a storm last night, but it is fine again to-day. EMERSON T. ABBOTT.

St. Joseph, Mo., Jan. 12.

Wintering Bees in a Shed.

I put 46 colonies into a shed boarded up on the back and in front down to within 5 inches of the bottom, then nailed a 4-inch strip edgewise on the inside, and put the hives up against the strip, and then packed with dry shingle and sawdust all around and on top, perhaps 8 or 10 inches deep. I left the covers on with the blankets. There is a good roof on the shed. Ought I to have taken the covers off, and have I got them too warm? I looked at two colonies one week ago, and they were all right. Do you think they will mold if the covers are tight? F. E. G.

Racy, Mich.

ANSWER.—I should think your hives are all right as they are, although I have had but little experience in that line. Don't have the entrance too much closed. Perhaps it's best to have the entrance as large as in the middle of summer. It might be a good thing to see that the wind doesn't have a chance to blow directly in at the entrance. A board a foot wide placed a foot from the hives would break the force of the wind.

Combs Molding in the Hives in the Cellar.

Some of my bees have molded in the cellar. I made a frame and raised them one inch off the bottom-board, and left off the covers, using a quilt of ½-pound of cotton to each colony, covered with burlap. I never wintered any bees in the cellar before. I had them all out, and they had a good flight last week. I took out all of the empty combs, and put them up where they will be perfectly dry. My cellar is not damp, to speak of. We have had very warm weather here this winter, for this locality. What will be my best remedy for the moldy combs? S. D. M.

Albany, N. Y.

ANSWER.—You have already applied the best remedy. Just keep the combs in a place that is perfectly dry, and then next summer give them to the bees, and they'll make a nice job of cleaning them up. Your cellar is probably a little too close. Plan some way to give it a little more air, and that will stop the molding, and also make it healthier for your family to live over.

Patented Hives in the United States.

Are there any bee-hives in the United States patented so that a person cannot make them for his own use? If so, please name the kinds? W. H. R.

Woods, Oreg.

ANSWER.—I should be obliged to go to the Patent-Office records at Washington to find out all the hives that are patented, and I suppose it would take up a large part of the Bee Journal just to contain their names. Of course, if there is a patent on a hive, you are not allowed to make it either for the use of others or for yourself.

There seems to be in the minds of a good many people the belief that if an article is patented, the patent is only to pro-

tect the patentee against other manufacturers competing in the sale of the article, but that any one may manufacture all he likes for his individual use. A little thought will show that in many cases such a view would entirely nullify any benefit that might come from the patent laws. Those laws are intended for the benefit of the people at large, and all wise people will have respect for them, as they encourage the invention of articles that will make short-cuts in labor.

Some patented articles are very complicated, and some are very simple. The latter are all the more valuable because they are simple, for it is very plain that an article requiring expensive machinery to make it would not be as much for the good of the public as one that could be made readily by any one without machinery. But in this latter case, suppose each one were allowed to make for his own use, where would there be any protection to the patentee?

While it is true that there are patent hives by the hundred, it is not equally true that they are all valuable. I remember seeing a very complicated patent hive on exhibition at the great Fair at Toronto, on the occasion of the meeting of the North American Bee-Keepers' Association there. It was examined with interest by bee-keepers there, not because there was a single feature about it that a practical bee-keeper would want to use, but it was a matter of interest to see how much expense could be put upon a single hive with no corresponding advantages.

The only patented feature about a bee-hive that all bee-keepers seem agreed upon as of general value is the movable-comb system. This was patented by Father Langstroth, but the patent expired years ago. I think most bee-keepers now-a-days use hives that contain no patented features, not considering them desirable. There are some, however, who use some one of the patented hives, having faith in them, and if any one has a desire to use such a hive the only straight course is to secure the privilege from the owner of the patent by paying the customary fee.

The Bees are Probably All Right.

My bees, owing to the severity of the weather, have not had a cleansing flight since before Christmas. On several mornings I have found half a dozen or more dead bees before the hive in the sun. Do they need water? If so, how is it best supplied? I keep the hives protected and shaded against the sun. The highest thermometer was 44° in the shade.

Harmony, Pa., Jan. 18. G. W. M.

ANSWER.—I don't suppose there's a thing wrong with your bees, and the best thing you can probably do is to let them severely alone. More or less bees are dying all through the winter.

How Hives with Bees Become Lighter in Winter.

If a good, strong colony of bees is put into the cellar, as a general rule does it get lighter? Where does the honey go when the bees don't get out of the hive? If the hive does not get any lighter, what do the bees live on?

Rockford, Ill. G. R. M.

ANSWER.—Did you never notice water running out of the entrance of a hive on a cold morning? That's the moisture that comes from the bees, and of course it comes from the food taken into the system. You can often see drops of water standing on the back wall of a hive in the cellar. All that, lessens the weight of a hive, and it will also be materially lessened by the weight of the bees that come out to die through the winter. Weigh a hive in the fall, and you'll find it a good deal lighter in the spring.

"Brown German" Bees—Size of Bees.

1. Would a cross between the large German brown bee and the Italian give us a good, all-purpose bee?

2. Which of the two races of bees is the largest—the German brown bee or the Italian? H.

ANSWERS.—1. Every now and then some one speaks of a brown bee or a gray bee, and I think there is an impression more or less prevailing that these are different from the common black bee. As nearly as I can learn they are all the same thing. There may be a difference according to locality, and I've seen the claim made that there was a difference in size in different localities, but when you get right down to the bottom I think you'll find that the German brown bee is the common black bee. At any rate they don't claim anything different in Germany, I think. So you will have your answer by knowing what the ordinary crosses of the Italian are, or what are commonly called hybrids. I believe some have kept established strains of this cross, but they seem never to have gained very general recognition as a desirable thing.

2. Without measuring closely, I don't believe you can see any difference.

How Long Can Bees be Kept in the Cellar?

1. How long can bees be kept in a cellar, confined in a hive, if they have plenty to eat?

2. Will a cellar under a house do if it is a little damp?

I have been a bee-keeper for 15 years, and I have always left the hives out-doors on a bench. I have 13 colonies, and some of them are very weak. I feed them when the weather is suitable. I have been a reader of the Bee Journal for three weeks, and I don't see how I could do without it.

Fortville, Ind. J. M. K.

ANSWERS.—1. I don't know. Mine are generally confined four or five months, and if everything was kept in best shape I suppose they would stand it longer.

2. Yes, only bees will not stand as much cold in a damp as in a dry cellar. Try not to let it go below 40°, and it would be well if it staid as high as 45, but not above 48 or 50.

Don't fool too much with those bees, feeding them in winter. If you think there's no danger of their starving, let them alone.

Eggs and Larvæ—Asbestos for Hive-Lining.

1. If eggs are taken out of a hive, how long can they be kept out and put back and hatch?

2. If a larva one day old, or thereabouts (well supplied with food, and the weather warm), be taken out of the hive, how long can it be kept out, put back, and live?

3. Can one send 300 to 500 miles, when the weather is warm, and get eggs and young brood and rear queens from the same?

4. Why not line bee-hives with asbestos? Fire cannot penetrate it, and I do not see how the cold could.

Humphrey, Nebr.

ANSWERS.—1. I don't know. I've tried it for a day or two, but the bees destroyed the eggs.

2. If you keep a brood-comb out of a hive a day, you'll find the larger larvæ coming out of the cells, from starvation I suppose, and I don't know whether the little ones can stand it much longer.

3. I doubt if it would work.

4. I don't know why it shouldn't be a good thing, if expense isn't in the way.

'Tis Winter-Time Again.

BY ED JOLLEY.

Serene and still the snow-clad hill
Looms up against the sky;
The wind does blow the sifting snow.
In places drifting high.
In the woodlands gray the wild winds play
With forest giants bold,
And through the vale there comes the wail
Of Winter, fierce and cold.

In stables warm, away from storm,
The lowing kine do keep,
While in the fold, so free from cold,
The shepherds' flocks now sleep.
And off to school to learn a rule,
And cipher, read and spell,
The children ride with joyous pride
At the sound of many a bell.

In the easy chair, so free from care,
The good man sits and reads,
While to the work she cannot shirk
The good wife cheerily speeds.
Around the hearth there's joy and mirth,
As evening rounds the scene—
There's nuts to crack, and the apple sack,
And a story-page to glean.

And all is well—oh, joy to tell!
Within the farmer's cot.
But how are these—their little bees—
Beyond the garden spot,
With hives snow-capped and cold enwrapped?
We trust to Highest Power,
To hear their hum when spring days come
O'er the gently blowing flower. Franklin, Pa

The American Bee Journal

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OLDEST BEE-PAPER IN AMERICA

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GEORGE W. YORK,
EDITOR.

Assisted by the following Department Editors:

DR. C. C. MILLER - - - "QUESTIONS AND ANSWERS."
MRS. JENNIE ATCHLEY - - - "THE SUNNY SOUTHLAND."
"GLEANER" - - - - - "AMONG THE BEE-PAPERS."
"BEE-MASTER" - - - - - "CANADIAN BEEDOM."
DR. F. L. PEIRO - - - - - "DOCTOR'S HINTS."
REV. EMERSON T. ABBOTT - - "NOTES AND COMMENTS."

Vol. XXXV. CHICAGO, ILL., FEB. 7, 1895. No. 6.

Editorial Budget.

The Ontario Convention must have been a good one, if Bee-Master's report on page 89 is any indicator. Canadian readers, as well as all others, will be interested in reading it.

The Sunny Southland department is omitted this week, as Mrs. Atchley failed to send copy in time. She has been so very busy the past month that it is a wonder she keeps up at all. Next week, without doubt, the report of that big Texas bee-meeting will be continued in her department, and then be published without further break.

Mr. F. A. Gemmill, of Stratford, Ont., has kindly sent me two of the circulars they used at the Ontario convention in advertising the "Honey-Bee Concert." The 4-page one is indeed a novelty. Besides the programme for the evening, it contains information about honey, and several comic apiarian pictures. It is very "taking." The people who failed to "get there" (and I was one of them), missed a treat. Well, there's nothing selfish about me, so I'll say I'm *glad* some of my good friends could enjoy it, if I couldn't.

Notes and Comments is another new department begun in this number (page 90) of the American Bee Journal. Mr. Abbott, who is the "Noter" and "Commenter," needs no introduction to our readers. He will likely touch on a good many things in bee-literature and bee-keeping mainly outside of any of the other departments found in the Bee Journal. Judging from his first installment, and what is to follow (copy now in my hands), he will keep up a lively department. As a preacher, we can imagine no one going to sleep in Mr. Abbott's audience. Surely, no one will be apt to nod when reading "Notes and Comments."

The New Form of the American Bee Journal pleases, and also occasionally does not find favor. Franklin Wilcox, of Wisconsin, wrote thus, after saying he didn't just fancy it: "But you can't suit everybody. Don't try. Some write to flatter—but not I." I think that nearly everybody will like this new form all right after getting accustomed to it. I hope so, for to me it seems "just the thing." Better get a binder for this year's numbers, and see what a fine volume (book) you will have at the end of the year. Price of binder, 75 cents, postpaid; or $1.00 for the binder and the American Bee Journal for one year. The binder is a good, strong one.

Attending Bee-Conventions.—I have received a number of very cordial invitations to attend certain conventions of bee-keepers, held in various parts of the country, and truly I should indeed be glad if I could accept them, and be present at the meetings. Not that my presence would add to the interest or profit of the meetings, but I would personally enjoy so much getting acquainted with the bee-keeping friends, and I would also gain bee-information that would be of much advantage to me.

But at present I will have to forego the great pleasure I would have in gratifying the wishes of my friends and my own enjoyment, for no one outside of those acquainted with publishing a weekly paper, can have an idea of the constant "grind" necessary to get the American Bee Journal out, and "on time," each week. It requires my closest attention, both day and night, and has been so ever since I first became its editor and publisher—June 1, 1892.

Some day, when I get the old American Bee Journal just where I want it (in its contents and office management), I expect to be able to devote some time to attending bee-convention, and in forming an acquaintance with the bee-friends and their various localities. Until that time, I must content myself with constant toil, hoping that that "good time," so long looked forward to, will come not many years hence.

Sympathetic and Consoling Words have come from many sources to Mrs. York and myself in our recent bereavement, and we want to assure all of our friends that their kindly interest and expressions have been greatly appreciated. I am so glad to know that bee-keepers are not so selfishly racing after the dollars and cents that they have no time to stop to speak a word of comfort or do a kindly deed. Among the numerous "treasured memories" received, there is room here for but one, which reads thus:

DEAR FRIENDS:—I know how impossible it is to silence your grief with words. I am also made sad to learn of the death of your sweet little baby girl. Your hearts plead for utterance in tears, and let them speak thus. I bow in sorrow at the taking of your little one, feeling that while the ripened fruit may be gathered, it seems cruel that the bud should be taken before it has even opportunity to unfold its blossom. But in Nature fruits fall, and so do blossoms and buds. In the ways of kind Nature this is perhaps best, and in the taking from your arms of this little one, you should try to accept the cross and bear it, believing that the bud will yet blossom and bear fruit in the Angel Land, whither the spirit of your pure child has so early flown.

Your friend, JENNIE ATCHLEY.

Flying Colors.—Editor Hutchinson, of the Bee-Keepers' Review, had this as the first editorial item in his January number:

The American Bee Journal has changed its form, reduced the number of its pages, but made them correspondingly larger, is using a better grade of paper, has secured some excellent contributors, and two more sub-editors, and, all in all, starts the new year with flying colors.

Thanks, Bro. H. Those "flying *colors*," though not seen distinctly, are represented by the United States flag, found on the first page of each number of the American Bee Journal.

It waves "Success" on every breeze,
To all our friends who now keep bees.

The Wisconsin Convention, at Madison, on Feb. 6 and 7, promised to be a very interesting one. I noticed, by the printed program sent me by Pres. Franklin Wilcox, that not a single essay is to be read—simply one big question-box, in which all can "take a hand." My, what a fine opportunity for Dr. Miller to enjoy himself. I hope he has been invited to be there, for a convention with no essays at all would simply "make his mouth water" for a whole week before and after. I shall be glad to see the report of that Wisconsin convention. They have some good bee-keepers in that region.

Mr. John Hufford, of Perrysburg, Ohio, has recently suffered great affliction in the loss, by death, of his son "Frank," 19 years old, and the main help in the bee-yard. Mr. H., having only one arm, he will miss his helpful boy very much, besides enduring all the sorrow.

A Correction.—Between the 3rd and 4th lines below the first illustration on page 51, put in these words, and it will be as it was intended: *and the true dovetailed joint.* In the 7th line below the same picture, read *make* for "made," and it will be as Mr. Abbott had it in his "copy."

Among the Bee-Papers

Conducted by "GLEANER."

A "BEE-SPACE" CONSIDERED.

"A ⅜ inch space is not a bee-space. Just half that room is a bee-space. When more than 3/16 of an inch space is allowed, then the bees will utilize the room for drones or what is called brace-combs."—Apiculturist.

For a long time ⅜ was the orthodox thing, then it got worked down to ¼, and the "A B C of Bee-Culture" called it a scant ¼, but this is the first time I remember to have seen it called 3/16. If bees will not plug propolis into 3/16, then Alley's space is best.

SEALED COVERS DEFENDED.

E. France comes to the defense of sealed covers, in Gleanings. He has used them successfully for 30 years. He covers the hive with an inch board, then puts over that straw 4 to 6 inches deep in the upper chamber, throwing away the straw in spring.

EIGHT OR TEN FRAME HIVES—WHICH?

The discussion as to size of hives doesn't seem settled. E. France says in Gleanings that he's on the fence. He runs his bees in hives three stories high, some of them having 24 frames, and some of them 27. He hardly knows which he likes best. He keeps the lowest story filled with brood, extracts from the upper two, and if he finds brood above he puts it down, or uses it to make new colonies.

BEE-KEEPING IN CUBA.

200 to 500 colonies can be kept in one location; one man can manage 700 or 800 colonies by having an assistant during extracting time; but buyers pay only 20 to 50 cents a gallon for honey, or 2 to 5 cents a pound. So says Fred L. Craycraft in Gleanings.

THE EUCALYPTUS OF CALIFORNIA.

Prof. Cook is quite enthusiastic in Gleanings over a tree in California that he has found his bees at work upon during the many bright warm days of October, November and December. It is *Eucalyptus longifolia*, has very showy and beautiful flowers that are creamy white, and continues in bloom ten weeks. Another encalyptus, probably *E. rostrata*, is said to be very fatal to bees, Mr. L. L. Pond having taken gallons of dead bees from beneath the blooming trees.

SCOTT'S SUPER LIFTER.

Geo. G. Scott's arrangement for raising supers (see page 34) will work nicely with little power, but why doesn't he go on and finish up telling what is to be done? For with the super raised above the hive we are still to do all the work that we would have to do without the lifter. What's the rest of his plan? On the whole, isn't it better to have something lighter than a super with 56 sections? And yet I know that some good crops of honey have been harvested with those same seven wide frames, of eight sections each.

BEE-PARALYSIS AND THE DRUG CURE.

Adrian Getaz treats the matter (see page 34) as though quite familiar with his subject, and leaves it in rather a hopeless condition, unless it be that he thinks some drug may be efficacious to cure both paralysis and foul brood. Good authorities have said that it is useless to look to drugs, but cures from drugs have been reported, and if enough of them come well authenticated, we may still put some trust in them.

Mr. Getaz objects to formic acid, because bees always have it, "and if it was such a good cure bees never would be sick." But the very fact that it's a staple article with bees is used an argument by others that it's good for foul brood, and that there may be a shortage of the supply, and then comes disease, when the bee-keeper can set things to rights by making good the deficiency.

STOPPING FURTHER SWARMING.

Jas. Poindexter's essay (on page 36) is a model essay, packed and compact. I'm sure a good many will want him to answer the following questions:

How many cases have you treated in the way you describe after the bees have swarmed? What per cent. swarmed again after the treatment? What per cent. killed the old queen after her release, and sent out a swarm with a young queen?

Canadian Beedom.

Conducted by "BEE-MASTER."

The Ontario Bee-Keepers' Convention.

The Ontario Bee-Keepers' Association held its annual meeting in Stratford, Jan. 22, 23 and 24. A large attendance had been expected, but, owing to stormy weather, many were prevented from coming who had fully intended being there. Those present, however, entered heartily into the spirit of the occasion, and the proceedings were full of interest.

The retiring President, Mr. A. Pickett, of Nassagaweya, in his opening address, reviewed the past honey season, which, owing to great heat and prolonged drouth, had not been a prosperous one. On the whole, not more than half a crop had been obtained. Feeling reference was made to the lamented death of Mr. S. Corneil, of Lindsay, the able Secretary of the Association. Much benefit had been reaped by the honey industry from Provincial legislation, especially the Foul Brood and Spraying laws. Regret was expressed at the rejection by the Dominion Senate of the Pure Honey Bill. There had been much dissatisfaction at the non-receipt of the prizes won by Ontario bee-keepers at the Chicago World's Fair, but the assurance had been given that they would not be delayed much longer.

CONVENTIONS—MAKING THEM MORE SUCCESSFUL.

A. W. Sherrington, of Walkerton, read an essay on "Conventions, and How to Make Them More Successful." He advocated bringing new men to the front and infusing fresh life into the proceedings. A discussion on the essay resulted in a resolution to appoint a committee on programme, and to make earlier arrangements.

SPRAYING FRUIT-TREES.

Prof. Fletcher, of the Ottawa Experimental Farm, spoke on the subject of spraying fruit-trees. The results of his experiments had proved that bees are liable to be poisoned if fruit-trees are sprayed with arsenical compounds while in bloom; that the danger is increased if the weather is propitious for activity on the part of the bees; and that spraying is no benefit to the fruit-trees until after the bloom falls. The spraying law, now in force in Ontario, is therefore in the interest both of bees and fruit.

FOUL BROOD—FUTURE OF BEE-KEEPING.

Mr. Wm. McEvoy, Foul Brood Inspector, gave a report of his year's work. He was glad to say that the disease had almost wholly disappeared in many localities where it formerly prevailed, but it was breaking out in other places, and needed a constant exercise of vigilance.

Mr. W. Z. Hutchinson, of Flint, Mich., read an essay entitled: "Will the future of bee-keeping be different from the past?" He held that it would. It would not, so much in the hands of specialists, many of whom had found it difficult to make a living out of bee-keeping alone, owing to a succession of unfavorable seasons. It was likely to become more of a side-issue and to be combined with other branches of rural industry. In the discussion that followed, the opinion seemed to prevail that the outlook for Canadian bee-keepers was brighter than that in the United States, owing to there being less trouble in this country from glucose adulteration.

DIFFICULTIES IN BEE-KEEPING.

A long and well-sustained discussion sprung up on an essay by Mr. J. K. Darling, entitled, "Some Difficulties." There were winter losses to contend with; spring dwindling; when bees were taken out of the cellar there was apt to be a mix-up and much confusion; some hives got crowded, others were depopulated. There was balling of the queens, and when increase was wanted, hives were queenless. Then when the honey-flow came, it was difficult to make the bees go to work in the upper stories. These and other difficulties opened up a wide field for discussion, embracing cellar and out-door wintering, the best way of putting out bees in spring that had been cellar-wintered, and the advisability of packing as a protection against backward spring weather. Great stress was laid by some on putting bees wintered in the cellar on the same stands occupied by them the previous season, to prevent the mixing and confusion described by Mr. Darling. Out-door wintering was advised to prevent spring dwindling and mixing of colonies. Mr. Pettit and others were strong in advocacy

of the cellar, and described their methods. To finish up the subject, Mr. R. H. Smith, of St. Thomas, read an essay on the advantages of wintering bees on the summer stands, cased in chaff-packed hives, with directions how to do it in the best manner.

MARKETING THE HONEY.

Mr. F. A. Gemmill read an essay on "Experiences in Marketing Honey," urging the greatest care in putting the finished product in the best possible condition, so as to be attractive to customers. Discussion on this and one or two other essays was laid over, and the opportunity did not return. Generally speaking, the time to discuss a subject is when it is fresh. After some delay, the points have somewhat faded. Alas! for the essay that is read just before adjournment for dinner or supper!

DOMINION EXPERIMENT APIARY.

The Dominion Government has started a small experimental apiary in charge of Prof. Fletcher, with a practical assistant. It has only been in operation one season, and the Professor gave some details of what had been done in experimenting with comb foundation. The work was incomplete, but so far as it had gone it emphasized the importance of using the best quality of beeswax, and not making foundation for sections lighter than seven feet to the pound. A vote of thanks was passed to the Dominion Government for the interest shown by it in bee-keeping, and to Prof. Fletcher for his presence and address.

EDUCATION—HONEY-BEE CONCERT.

Mr. Allen Pringle read an essay on "Education," which discussed the general subject without special application to bee-keeping, more than to any other occupation. It contained some original and practical ideas, in regard to which there was naturally some difference of opinion.

Mr. F. A. Gemmill's "Honey-Bee Concert" came off in due course. It was not so great a success as it deserved to be, owing to the inclemency of the weather, but a pleasant evening was spent in music, song, hearing addresses, and seeing magic lantern pictures. Mr. R. McKnight gave an address on features of bee-life not generally known. C. C. James, Esq., Deputy Minister of Agriculture, spoke at some length on the value of skill in the various branches of rural industry, with a special application to bee-keeping. The magic lantern part of the entertainment, given by Mr. R. F. Holtermann, would have been more pleasing but for a deficiency of light in showing the pictures on the sheet. Many of them were too dim and indistinct to be seen clearly.

THE OFFICERS—BUSINESS WIND-UP.

The election of officers resulted in the appointment of Mr. J. B. Hall as President, an honor tendered him before, but declined by him until now; Mr. J. K. Darling, Vice-President; and a Board of 13 Directors—one for each district into which the Province is divided by the Agriculture and Arts Act.

The new President had a brief taste of office while the business was being wound up. Mr. Holtermann proposed the adoption of a score-card for judging honey by points in the same way as poultry is judged at exhibitions, which was adopted.

A resolution of thanks was proposed to the members of Parliament, who had voted in favor of the Pure Honey Bill. It was objected that this was unusual, and that if the branch of the House that favored the Bill was to be thanked, the Senate which rejected it should be censured. But these views did not prevail, and the resolution carried.

It was decided to hold a special meeting of the Association at Toronto in September, when the North American society meets there, and on the completion of business adjournment was made to that date.

The Board of Directors met when the public meeting had adjourned, and transacted several items of business. Mr. Wm. Couse was reappointed Secretary; Martin Emigh, Treasurer; Mr. McEvoy Foul Brood Inspector; and Mr. F. A. Gemmill, Sub-Inspector. The sum of $200 was set apart for affiliated societies, no one to receive more than $20; the Canadian Bee Journal was selected as the premium to members for the year; $25 was appropriated for prizes at the Toronto Industrial, and a like sum for the Western Fair. The President, Vice-President and Secretary were appointed as the Executive Committee, and Brantford was chosen as the place of the next annual meeting.

A Moderate Increase of colonies in one season, will, in the long run, prove to be the easiest, safest, and cheapest mode of managing bees.—*Langstroth.*

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Too Good to Keep.—"A report of four columns in the papers gave the discussion, while not an essay was printed, although some good ones were read." Extract from "Stray Straws," about the Marengo, Ill., Horticultural meeting.

"Tell it not in Gath, publish it not in the streets of Askelon; lest the daughters of the Philistines (believers in essays) rejoice."

Right in the Doctor's own city, in a society of which he is no doubt a member, and in whose deliberations he no doubt took part, they had essays! "Good ones," too! Who would have thought it! That was a very grave mistake, not to take up all the time with apple and berry "talk;" but, then, we all be very frail mortals and will "make mistakes."

Not a Good Plan.—The following from an old bee-paper is worthy of some further attention: "It may be, however that in the very mild winters of Colorado it is warm enough for them to find the food above, especially if on a warm day you pound or kick the hive to rouse them up thoroughly."

Owing to the continued cooling of the earth and the lateral pressure that has been going on for some time, on account of said cooling, the elevation of the Rockies has greatly increased, and the climate has changed very much since the above was written, as the mercury has been known to hover around 20° below not long since in this land of "mild winters." Then, if the weather were ever so mild, they surely must have had the worst kind of luck those days in wintering their bees, if they practiced "pounding and kicking" the hives in order to wake up the bees and make them eat. If they had ever known about my sugar candy, they might have saved all that trouble, and the bees, too, I opine. The less the bees are stirred up in January and February, the more bees there will be to stir up when March comes.

Another One.—The program of the Ontario Bee-Keepers' Association made provision for *nine* lectures and essays, and among the names of those who were to read essays was found the name of the editor of the Review. How is that, Friend H.? Will you inflict such punishment on those people who may come a long way, and at a great cost? But, to be serious, that essay is sure to have something of value in it, and here is a very strong argument for essays. Friend Hutchinson is not much of a talker, but he drives a tremendous pen, and when he sits down to write an essay on any subject pertaining to bees, it is sure to be as full of meat as a cocoanut is of milk. Do you see the point? Score one for essays. Next.

So Have We.—"Our cheese as well as our honey was the best at the World's Fair." "Ontario has a climate as well as the flora for producing the best." "The linden, the clover, the thistle, the raspberry, the maple, the willow, the sumac, the buckwheat, the golden-rod, and numerous other plants yield abundantly."—Allen Pringle, on page 26.

What is the matter with our good friends over the line, anyway? Do they not know that all those things grow in this poor, benighted country? and that only one of them—clover—furnishes real, all-around first-class honey? Of this we have as much as they. As for climate—well, I always thought that the dry, high altitudes furnished the best honey, and I am inclined to think so yet. Then, again, do they not know that we have sweet clover and alfalfa over here in this great country of ours? When it comes to competing with either of these, none of the plants mentioned above are "in it." Why, I saw 2500 pounds of alfalfa honey, which was shipped to this city a short time ago, that was the equal of any honey at the World's Fair, and I am sure that it was superior to any honey there which was not gathered from the same source, if flavor, body and color are the things that count in comb honey. I do not think the United States need to go out of the honey-business simply because some other country (if she did) took more premiums at the World's Fair. They can have the premiums, but as long as alfalfa and sweet clover grow, and we have the fertile lands and favorable climate of the great West, we will go on producing as good honey as there is in the world, just the same.

Now, Friend Pringle, you had your say, and I had mine; and so we are even.

Convention Notices.

MINNESOTA.—The regular semi-annual meeting of the Southern Minnesota Bee-Keepers' Association will be held on the first Monday in May, 1895, at LaCrescent, Minn. All bee-keepers invited. E. C. CORNWELL, Sec.
Winona, Minn.

UTAH.—The Utah Bee-Keepers' Association will hold their semi-annual meeting on Thursday, April 4, 1895, at 10 a.m., in the Fish Commissioner's rooms in the new city and county building, Salt Lake City.
Provo, Utah. GEO. E. DUDLEY, Sec.

NEW YORK.—The Cortland Union Bee-Keepers' Association will hold their Annual meeting at Good Templars' Hall, Cortland, N. Y., Saturday, Feb. 9, 1894. All interested, especially bee-keepers, are cordially invited to attend. C. W. WILKINS, Sec.
Homer, N. Y.

TEXAS.—The Texas State Bee-Keepers' Association will hold its 17th annual convention at the aplary of W. R. Graham, in Greenville, Tex., on Wednesday and Thursday, April 3 and 4, 1895. All interested are invited to attend. "NO HOTEL BILLS."
Ft. Worth, Tex. DR. WM. R. HOWARD, Sec.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association on March 16, 1895, at Goodno's Hall, in Bronson, Bourbon Co., Kans. It is the annual meeting, and all members are requested to be present, and all bee-keepers are cordially invited. J. C. BALCH, Sec.
Bronson, Kans.

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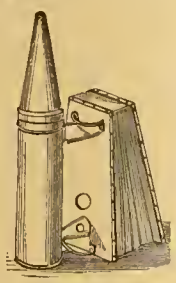

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F. I. SAGE & SON, 183 Reade Street.
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Honey & Beeswax Market Quotations.

CHICAGO, ILL., Dec. 27.—Up to the present the sales on honey have met with our expectations. We have received considerably more honey than we figured on handling, owing to the short crop report, and we think the early shippers reaped the benefit. However, we are now getting the average price, viz.: Fancy, 15c.; white, No. 1, 14@13c. Extracted, 6@7c.
Beeswax, 28@29c. J. A. L.

CHICAGO, ILL., Jan. 3.—As usual, the volume of trade in honey is small at this season. But our stock is not heavy, and soon as this month is past we expect a demand that will clean out all present and prospective offerings. Comb sells at 14c. for good white; fancy brings 15c.; dark grades, 8@12c. Extracted white, 6@7c.; dark, 5@6c.
Beeswax, 27@28c. R. A. B. & Co.

NEW YORK, N. Y., Dec. 20.—The market for comb and extracted honey is good, and the supply equals the demand. Fancy clover and buckwheat sells best; off grades are not quite as salable; and 2-pound sections are little called for. We quote as follows: 1-pound fancy clover, 13@14c.; 2-pound, 12½@13c.; 1-pound white, 12@12½c.; 2-pound, 12c.; 1-pound fair, 10@11c.; 2-pound, 10@11c.; 1-pound buckwheat, 10@11c.; 2-pound, 9@10c. Extracted, clover and basswood, 6@6½c.; buckwheat, 5@5½c.; Southern, 50@60c. per gallon. Beeswax, scarce and in good demand at 29@30c. C. I. & B.

CINCINNATI, O., Jan. 7.—Demand for honey is very quiet since the holidays, and prices are unchanged. Comb honey brings 14@16c. for best white, and extracted 4@7c.
Beeswax is in good demand at 23@28c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, Mo., Jan. 7.—The demand for both comb and extracted is light. Supply good. We quote: No. 1 white comb, 1-lbs., 14@15c.; No. 2 white, 12@13c.; No. 1 amber, 13c.; No. 2 amber, 10@11c. Extracted, white, 6@6½c.; amber, 5@5½c.; dark, 4½c.
Beeswax, 22@25c. C. C. C. & Co.

PHILADELPHIA, PA., Jan. 31.—Comb honey is very plenty and slow of sale at 12@13c. Extracted in fair demand at 5@6½c.
Beeswax scarce at 27@30c. W. A. S.

BUFFALO, N. Y., Jan. 21.—The honey market is very quiet. We quote: Fancy, 13@14c.; choice, 10@12c.; off grades moving slowly, trade being only on fancy; buckwheat slow at 8@10c. Extracted very dull, at 5@6c.
Beeswax, 28@30c. B. & Co.

NEW YORK, N. Y., Dec. 31.—The demand for comb honey has been very light of late and has now almost dwindled down to nothing. The supply has been accumulating and there is a large stock on the market. In order to move it in round lots, it will be necessary to make liberal concessions from ruling quotations. We quote: Fancy white, 1-lbs., 13c.; off grades, 11c.; buckwheat, 9c. We have nothing new to report in extracted. It is moving off slow and plenty of stock on the market, with more arriving. Beeswax is steady and finds ready sale on arrival at 30c. per pound. H. B. & S.

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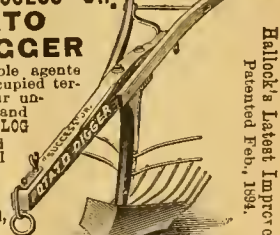
YORK, PA.



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LEAHY MFG. CO., Higginsville, Mo.
Mention the American Bee Journal.

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

How Many Colonies Can He Keep in His Location?

Query 957.—First, I will give the source from which our honey comes. We have perhaps 100 acres of willow, soft maple and elm; next comes fruit-bloom, trees without number of all kinds, and after this, white and Alsike clover, of which we have at least 100 acres. Following these, the mammoth clover helps to finish up sections. Then comes (the "get there" everybody) the basswood; about 3000 trees are within reach of my bees. There is plenty of buckwheat here, but it does not secrete of late years. And last, but not least, fall flowers are waving in every direction. I think there were 500 acres of golden-rod, asters, snapdragon, etc., also in range of same. Now comes my question: How many colonies can I keep in one place, here, and make it pay?—Michigan.

G. M. Doolittle—From 200 to 300.

Chas. Dadant & Son—100 to 150 colonies.

Eugene Secor—500 in such a favored locality.

Rev. M. Mahin—As many as one man can manage.

Jas. A. Stone—I would say 200 colonies. Try it, and see.

E. France—100 to begin with, if you know how to handle them.

W. G. Larrabee—You have a good locality that ought to support 150 colonies, or perhaps more.

C. H. Dibbern—I should think you had a field that would easily support profitably 200 to 300 colonies.

Prof. A. J. Cook—Surely 100 colonies; perhaps more, though occasional years of drouth will leave you honeyless and moneyless.

P. H. Elwood—Try it and let us know. I don't know. Quinby thought 60 or 70 in a place paid best in the Mohawk Valley (N. Y.)

Dr. C. C. Miller—Just from reading the description it sounds as if 300 or 400 might do well, but when you actually try it you may find 100 to 150 enough.

J. E. Pond—This is one of the questions that can only be answered by guess. Perhaps 200 colonies would be about right. Much will depend upon management, however.

Mrs. Jennie Atchley—You kind of scare me. I don't know. But if all your trees and shrubs, weeds, etc., produce honey in abundance, it will be hard to overstock your locality.

Dr. J. P. H. Brown—It depends upon how the location is already stocked. If few colonies are kept by others, you might venture 50 or 75, and in favorable seasons it might support 100.

B. Taylor—In a locality very similar to this, I have kept 200 colonies, and good yields from them. Much depends upon the apiarist as to how many colonies can be profitably kept in one yard.

Rev. Emerson T. Abbott—That depends entirely upon the man who bosses the job. I should not want more than 200 colonies in any one place, yet a good man at the business might make a larger number profitable where there is such an abundance of bee-pasture.

H. D. Cutting—I would like to have 200 colonies in just such a location. BUT I have seen just that kind of location, and 25 colonies did not average 10 pounds per colony. You must have other conditions.

Mrs. L. Harrison—I do not know. The most that I ever saw kept at one place, was 600—at Wewahitchka, Fla. The owner of this large apiary said that he had too many in one place. The bee-pasture there was the best I ever saw.

G. W. Demaree—The discription you give of your honey sources is all one could well imagine, except 100 acres of white clover is not large. In my opinion, you can handle from 200 to 300 colonies in a locality like the one you describe.

J. A. Green—You would probably make it pay with any number up to 400, but to give the best returns from labor and outlay, you would not want over 150. Yours seems to be an exceptionally good locality. Ordinarily I should not advise over 75 in one place.

R. L. Taylor—That depends upon the character of the season. In a very poor year for nectar 5 colonies might fail to pay, and in an excellent year 500 colonies might pay better than any less number. In ordinary seasons 500 might pay, but 300 might pay better. At a venture, I should "guess" 250 to 300 would be best, on the whole.

Wm. M. Barnum—It depends entirely upon how much time you can devote to their care. The number of bees in the neighborhood, will also have some influence. You have drawn a very flowery picture, however; and were it one-half true, I would not be afraid to handle 200 colonies, divided into two or three apiaries. One man can just about care for 100 colonies, excepting possibly during swarming time, when the good wife can probably help him through. By careful management, the two might care for the 200 colonies.

Dovetailed Hives,

Sections, Extractors, Smokers, and everything a Bee-Keeper wants.—**Honest Goods at Close, Honest Prices.** 60 p. catalog free.

J. M. Jenkins, Wetumpka, Ala.

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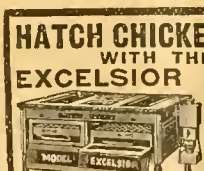

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A. C. BROSIUS, Cochranville, Pa.

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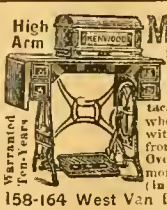
Ap1 *Mention the American Bee Journal.*

Hunt's Foundation

Led all others in the Government experiments It exceeded the Given by 6½ %, and all the rest by 24½. See Sept. Review, 1894. The Largest, Most Comprehensive Catalog of everything needed in the Apiary, FREE. Cash for Beeswax, or will make it up in any quantity. **M. H. HUNT, Bell Branch, Mich.**

4Etf *Mention the American Bee Journal*

MY HUSBAND can't see how you do it.



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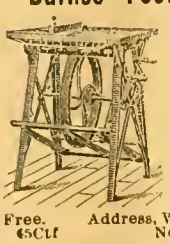

Read what J. I. PARENT, of CHARLTON, N. Y., says—"We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will. Catalogue and Price-List Free. Address, W. F. & JOHN BARNES, No. 995 Ruby St., Rockford, Ill.

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If so, drop us a Postal and we shall be pleased to send you a copy of our 1895 Catalogue and Price-List. | **G. B. LEWIS CO., Watertown, Wis.**

Mention the American Bee Journal.

"I TOLD YOU SO."

MRS. ATCHLEY:—The 19 1-frame Nuclei I bought of you last year with Untested Queens, gave me 785 lbs. of section honey and 175 lbs. of extracted honey, besides some unfinished sections. The best one gave me 120 one-pound sections well filled.

Heber, Utah, Oct. 9, 1894. J. A. SMITH.

Now, didn't I tell you it would pay to ship Bees north to build up and catch the honey-flow? **Bees by the Pound**, on a Comb and Honey to last the trip—$1.00: 10 or more Pounds 90c. per pound. **NUCLEI**—$1.00 per Frame; 10 or more Frames, 90c. each. Untested Queens to go with them [same as Mr. Smith got] 75c. each.

UNTESTED QUEENS—by mail, either **Leather-Colored Italians, 5-Bands,** or **Carniolans**—$1.00 each; $5.00 for 6; $9.00 per Dozen—till June 1st, **then** 75c. each; $4.25 for 6, or $8.00 per Dozen.

TESTED QUEENS—**3-Bands,** $1.50 each; **5-Bands** and **Carniolans**, $2.50 each. **Fine Breeders,** of either race, or **Imported Queens,** $5.00 each. My **Straight 5-Band Breeders,** $10.00 each.

FULL COLONIES—with Untested Queens, $6.00 each.

Send for Prices and Discounts to Dealers, and by the Quantities.

I have the only **Steam Bee-Hive Factory** in South Texas. **Root's Goods, Dadant Foundation,** and **Bingham Smokers.** Safe arrival guaranteed on everything. Send for FREE Catalogue, that tells all about Queen-Rearing.

JENNIE ATCHLEY, Beeville, Bee Co., Tex.

Doctor's Hints

By DR. PEIRO, Chicago, Ill.

Test for Mushrooms.

Mushrooms having a red or pink covering are invariably poisonous. The test for the edible variety is the boiling of an onion with them. If the onion turns green, the m's are bad.

Consumption Contagious.

Yes, consumption is contagious as well as heritable. Constant attendance on a consumptive may develop the disease in otherwise healthy persons. The well and the diseased should never sleep in the same room, certainly not in the same bed.

Influence of Edibles.

Pie-plant acts especially upon the liver and bowels, asparagus on the kidneys, onions on the membrane of the lungs, lettuce on the nervous system, and melons are refreshing to the stomach.

Flowering Plants in the Home.

Flowering plants are not only things of beauty, admired by all invalids, but are beneficial in living and sleeping rooms. They absorb carbon from us and in return exhale oxygen—just what we need.

Harmful to the Eyes.

A certain very foolish fad just now prevails among society ladies, of applying a liquid lotion to the eyes to make them appear sparkling and fascinating at evening receptions. Oculists reap a handsome harvest as the result of this vanity.

Spank-Cure for the Drowned.

Spank-cure is the thing for boys who are supposed to be drowned. When taken out of water, they should be rolled over a barrel to force the water out of their stomach and lungs, and spanked good and hard. If the skin gets red, he'll soon be all right.

Madstone a Humbug.

Big humbug! There is absolutely no virtue in a "madstone." Don't go and pay your money to the "fake" that claims to have one. The grindstone, in your woodshed, is just as effective!

Fish and Brains.

It is an old fable, that to eat fish makes brain. U-m! Why is it that fish is so plenty and brains so scarce?

Cracked Wheat and Oats.

There is no better food for breakfast than a good, big dish of cracked wheat or oats. They contain the phosphorous and other properties the system greatly needs.

Don't Eat Nuts at Night.

Nuts, too, are very nutritious, but should not be eaten at night, unless you desire a visit from ghosts and goblins in your dreams.

Dye in Red Stockings.

Yes, the wearing of red stockings, by children in particular, has often resulted in serious consequences, occasioning painful eruptions, blood-poisoning and severe ulcerations, due to the dye used in coloring.

The Home Remedy Case

This choice selection consists of 15 Remedies, especially chosen with a view to the most probable requirements of the family; put up in a nice Leatherette Case with a Booklet of Directions so clear that no one can go wrong.

The supply of Medicines is quite enough for months, perhaps years, and will save you many times what it cost, besides much trouble and anxiety during sickness in the family. These are no patent medicines!

When any of the Remedies are used up, we will promptly mail a duplicate bottle of the same Remedy on receipt of 25 cents for each bottle.

If you value life and health, this Case is worth its weight in gold to any family! Price, prepaid, $3.00.

A Liberal Offer.—We offer the "Home Remedy Case" and the American Bee Journal for one year—both for only $3.00—making the Bee Journal free.

Send postal card for free Circular. Address,

G. W. YORK & CO., 56 5th Ave., Chicago, Ill.

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BUY YOUR COMB FOUNDATION

NOW, before it follows suit, and melt up your Old Combs for April delivery.

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I will send a Guaranteed 5-Banded Yellow Queen, bred from a Breeder selected from 1000 Queens (some producing over 400 lbs. of honey to the colony); or a 3-Banded Italian Leather-Colored Queen direct from a Breeder imported from Italy. Oct. '94—**at 75c.,** and a special low price for a quantity.

My secret is to sell an extra-large amount, which enables me to sell at low prices. Will run this spring 350 Nuclei—have 1 home and 4 out apiaries. **Booking Orders Now**—will begin shipping March 1st. No Queens superior to my Strain.

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G. W. YORK & CO., 56 5th Ave., Chicago, Ill

General Items.

There, There!

Now, boys, stop that quarreling at once. The idea, that the names of a few weeds should make either of you so spunky! When you can't settle things, call on your old dad to decide matters.

You are perfectly correct in your statement, Charles, that *Eupatorium perforliatum* is boneset; while you, Emerson, are equally justified in the matter of hoarhound; *Marrubium vulgare* is right.

But I do hope I won't again have to remind either of you that another display of your young tempers will be the occasion for inviting you both out into the woodshed, to beat a tattoo with the well-seasoned shingle! M. DEA.

Nice Winter for Bees, Etc.

We have had a very nice winter so far. The weather was so warm that some of my bees were out flying around to-day.

I am very much pleased with Editor York's taste, and style of the "new suit of clothes" he donned the Bee Journal with, and I hope that it will continue to be a weekly visitor to my house as long as I or it lives, because I intend to keep bees all the rest of my life, unless, as the Irishman would say, "They sting me to death."

J. C. KNOLL.

Glenwood Park, Neb., Jan. 6.

Commendable Stick-to-it-iveness.

We have had two very poor years for honey in this part of the country. One year ago last summer I had one swarm from 7 colonies, spring count, and about 50 pounds of comb honey. Last summer I did not have a single swarm, and obtained less than 50 pounds of comb honey. Most of my neighbor bee-keepers are very much discouraged. I hope for a better season the coming summer. I have not sold honey enough in the last two years to pay for the American Bee Journal, but I hardly know how to get along without it.

JOHN KERR.

Cedar Falls, Iowa, Jan. 9.

Preventing Brace and Burr Combs.

The trouble of brace and burr combs between top-bars and supers can be effectually and easily prevented thus:

Take 3 or 4 strips of tin about 3 inches and width of the hive, and lay them 1 to 1⅛ inches apart across the frames, and the thing is done. This will reduce the linear space between any two frames by about ⅜. The remaining ⅛ divided into 3, 4 or 5 equidistant openings of 1 inch, more or less, is abundant. Success by this method has fully convinced me that those 10 or more long passageways are the real cause of the trouble. JAY HAWK.

Holton, Kans.

Another Wisconsin Boy Bee-Keeper.

I am so glad to see in the Bee Journal that the editor does not believe in the old saying, "Boys should be seen and not heard," and therefore I venture to give my experience in the bee-business.

I commenced two years ago with one colony, which gave me 100 pounds of fine honey. I now have 3 colonies in the cellar, in good condition. I sold 2 swarms last summer, also some honey, besides I have a milk-can full, of just as nice white granulated honey as you can wish for. I whittled a little paddle which I lay on the top of it, and whenever I feel like taking "a chew," I am at liberty to do so. It is bee-keeping for pleasure at present.

I should think if the boys and girls only knew how sweet and nice honey-candy is, they would keep bees.

Pa has taken the American Bee Journal for years. I like to read it, and expect pleasure will turn into business some day.

Pa likes the bee-business very much. By helping him, and reading the Bee Journal, I can learn how to take care of them myself. I hope the Wisconsin boys will try the paddle, and see how nice it works.

Long live the editor that gives the boys and girls a chance! BEN F. SMITH.

Plum City, Wis.

Lots of Rain in the Mountains.

We had lots of rain in the mountains here, and expect a good honey-flow this year. Most of the bees died from starvation. C. SCHLIESMAYBR.

Neenach, Calif., Jan. 4.

Splendid for a Poor Year.

How is this for a poor year? We had 70 colonies, spring count, in 1894, and increased to 106. We run 76 colonies for extracted honey, and took 9,880 pounds from them. From the other 30 colonies we took 1,440 pounds of comb honey.

Fresno, Calif. JACKSON & RAINS.

Bothered with Warping Covers.

As I have heard so much said about flat covers warping in the hot sun, and I have been bothered so for several years, last year I went to the blacksmith shop and got some old wagon tire, which I cut into lengths 14 inches long, bent this shape ——, I punched holes in them, 4 in number, and dressed the edges down to ⅛ inch, so as to turn the water off. I put one on each end, with four screws in each. None have warped any yet. L. B. WHITNEY.

Covington, Pa.

Wax Spots—Wax Evaporating.

If not too late, I will give my way to remove wax from clothing.

Hold the garment with the wax spots on, near a steam jet—the spout of a teakettle will do—and the "spots" will disappear as if by magic.

Has it ever occurred to any of the readers of the American Bee Journal, that when you render wax in an open vessel a large per cent. evaporates—a *very large per cent.?*

Tacoma, Wash. CHAS. SWINDELLS.

Report for 1894—Honey-Thieves.

From 75 colonies, spring count, in 1894, I got 4,000 pounds of nice extracted honey. At the end of the season I had 107 colonies in good condition, and all were wintering nicely until Jan. 5, when thieves entered my apiary and ransacked 8 colonies, and took out 39 combs of honey. The heaviest combs were taken, bees shaken off, and the hives covered again. The thieves understood their business well. I patched up 3 colonies, but 5 are gone entirely. No clew to the thieves as yet. B. W. HAYCK.

Quincy, Ill., Jan. 12.

The Prospects in California.

The old year has passed away, even in California, and with it many expectations and disappointments; and now the new year has put in its appearance, and with it new hopes and anticipations have sprung up; even the "Old Reliable" has taken on a new form, and changed so much in appearance and general make-up that at first sight I came very near taking it for an intruder or stranger, but some of the "old land marks" soon gave the necessary prelude, and I soon sailed into its contents. The first page is exactly to the idea that came to my mind some time ago, while looking over the old numbers with a view of putting them into book form—the front covers were especially in my way; in the new number the objection is done away with, making it look very neat, too.

The prospects for the coming season are

somewhat better than they were last year about this time, so far as the weather is concerned, for we have had more rain already up to date than we had the whole of the last hear; but rain alone cannot do us much good—we must also have plenty of sunshine, and, besides the above, we need the busy little workers to bring in the "sweet stuff," or else it will do us no good, and it seems they are greatly missing in quantity, for I hear from all quarters (of this section) that a great many colonies have either died out entirely, or else they are so reduced in quantity that it will take them a long time to build up in the spring. One of our oldest bee-keepers told me the other day that he finds numbers of his hives that have less than a quart of bees in them, and most of them are short of honey, and the bee-keepers almost too poor to buy food and raiment for themselves and their families. Tough indeed, but what can't be cured will have to be endured, yet *we* feel courageous enough to go ahead; we do not feel lonesome, for *we* are a great company, according to the reports of the fraternity in the American Bee Journal.

H. F. JOHANNING.

Et'wanda, Calif., Jan. 9.

Alfalfa to be Sown in Nebraska.

I would like to see some reports from bee-keepers in Nebraska. Mine for 1894 is as follows:

I increased from 24 colonies to 33, and fed 200 pounds of sugar for winter. I don't know of any one near here who got any surplus honey. There will be considerable alfalfa sown here next spring, and we hope for better honey-crops in the future.

A. W. SMITH.

Shelton, Nebr., Jan. 14.

The Future and Past Season.

All the main honey-plants are now up, and looking fine. If our spring is favorable. I think we will have a good honey crop. We have had a very long cold spell; my bees were without a flight for 13 days, which is the longest they have been so since I kept bees in Texas. I run 28 colonies, spring count, last season, and increased to 40, and secured $50 worth of honey. The price here was from 15 to 20 cents for good honey. I produce mostly comb honey in one-pouud sections, as I find better sale and a better price for it. I secured a full 100 pounds of honey-dew, which I will not describe, as I think Dr. Wm. R. Howard sent the editor a sample of it.

I am very much pleased with the American Bee Journal, and wish it much success. Hurrah for "The Sunny Southland!"

LEONARD COWELL.

Fort Worth, Tex., Jan. 8.

Several Items from Tennessee.

I had one colony last summer whose queen failed to become fertilized. Not knowing the condition of the queen, the colony became weak, and starved out. On examination I found the combs full of young drone-brood. These drones were the size of worker-bees, except drone shape.

Our zero weather has broken up, the thermometer registering 60 degrees to-day. The bees had a good flight. and seemed to enjoy the warm sun very much. My bees are wintering better than usual. I packed with chaff and hay pads. I think the packing is a great benefit to the bees in some winters here, and in some it isn't. I find the chaff to be the best absorbent.

I have colonies that allowed some of their drones to go into winter quarters. This isn't a common thing in this part of the country. I think the reason they took them into winter quarters was due to the amount of honey they had. The colonies are a little ahead of any that I ever saw in stores. They are 8 and 9 frame hives. the frames are 15 inches long, inside, and 10 inches deep.

I believe that a deep frame is the best for all purposes in the brood-nest. I don't think that there is a bee-keeper anywhere but will agree with me on deep frames for the best. Bees cluster at the bottom of the the frames in the fall, and work their way to the top by spring. If the frames are shallow, they get to the top during a cold spell, when they can't retreat, and cluster again in a new place, and starve, to a great extent.

Well, I didn't know the "Old Reliable" last Friday morning, when the post-office clerk handed it to me. Thinks I to myself, "This is a sample copy of a new bee-paper." I tore off the wrapper, and there it was, the same old American Bee Journal in new style, with its broad face, and new dress on. It didn't look natural. I would read it if it was in newspaper form. Much obliged to you, Mr. York, for your new get up. And I wish the "Old Reliable" much success.

I want to ask Mrs. Atchley, through the Bee Journal, what kind of timber there is in Bee county, and surrounding counties.

A. C. BABB.

Greenville, Tenn., Jan. 7.

Fears the Bees Won't Winter Well.

I see the Bee Journal has come out with a broad face for 1895. All right, I am satisfied with it. It is well worth twice the money it costs, to any one having a few colonies of bees.

I put out 45 colonies last spring; and it was cold and wet, and they dwindled away to 30, and some weak ones among them, too. I got about 1,200 pounds of comb honey, and increased to 52 colonies. They are in the cellar, and some have commenced to spot their hives already. They gathered a lot of poor honey late last fall, which I think causes it. I don't think they will winter well.

I wish the Bee Journal success, and recommend it to all who keep even one colony of bees. GEO. H. AURINGER.

Bonniwell's Mills, Minn., Jan. 9.

The 5-Banded or Golden Italians.

I commenced two years ago with 3 colonies, and we have had what bee-men call bad years. I have had considerable honey for home use. I sold one colony, and lost one swarm by its going off. I carried into the cellar, Dec. 1, 14 colonies in the best condition for winter I have ever had. All were strong, and their hives full of honey. I am a pupil of Mr. J. C. Balch. My first bees were black, and I got some queens and introduced them, and of course some of them proved to be more yellow than others, but the colony that was the deepest, and whose drones were better marked than any in the yard, was the very best I had. Her bees gathered more honey, and the queen was more prolific than any I had. They seemed to be cross, but I don't find fault with them for that, as long as they are rustlers.

I have been reading the articles on the 5-banded and golden Italians. Last fall I sent to West Virginia and got a warranted queen; I introduced her about Sept. 1, during the fall honey-flow, and I must say she is a dandy—almost all yellow; and when I carried the bees in for winter, nearly all the bees in her hive were of her kind, and a fine lot as to color, but they came too late to test their industry before next spring. But since reading the comments in the papers recently on the golden queens, I thought I would ask those commentators whether they would advise me to kill that queen and colony before spring, as I don't want to keep them if they are as bad as some make them. If the yellow bees are better than the black, does it not follow that the purer the better? And does not the most of the fault come from the way they are reared by our queen-breeders, and the artificial methods they use that produce dwarfed bees, that have no vitality, and, in fact, there is nothing left but the color? I think so. W. J. PRICE.

Elsmore, Kans., Jan. 14.

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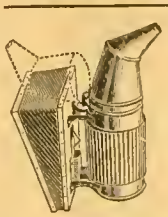

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Contributed Articles.

On Important Apiarian Subjects.

The Size of Hives and Frames Considered.

BY C. DAVENPORT.

I have used a good many kinds of hives and different kinds and sizes of frames, and as this is about the time that a good many will be thinking of ordering hives, so as to have them ready for next season's use, I am going to give my experience with different kinds of hives, frames, etc., and my opinion of them.

It pays to order during the winter. Most dealers give a discount then that more than pays the interest on the money invested, and as Mr. B. Taylor—one of our best and most experienced bee-keepers—once said, a great deal more is lost by not having supplies on hand, and ready for use, than there is by having an overstock.

I have noticed that there are not many writers who recommend a hive by name. Now I am going to recommend a hive and frame for this locality, for those who wish a single brood-chamber hive, no matter on what plan the apiary is run. It is a hive and frame that is hard to excel. This is the Dovetailed hive and improved Hoffman frame, which is sold by all dealers. This is one of the most practical hives in use, and if one wishes to make his own hives, there is not a frame hive that is more simple or easy to make than this without the dovetails, and if they are well nailed at the corners, they answer just as well without them. But those strips on the bottom-boards are one of the main points in favor of this hive. A bottom-board can be made very easily, though, by nailing a couple of cleats on the underside—one at each end—to keep it from warping, taking common lath and shaving them down to the right width for the strips. When I first commenced to use this hive I did not like or appreciate those strips on the bottom-boards, but I do now.

Some report having winter losses in this hive. I have had the least loss in winter with it of any frame hive I have. I do not want any enamel sheets, quilts, bevel joints, or porticos on hives any more. In fact, I sawed the porticos off all my hives that had them on last summer. They were a nuisance with me.

Winter View of the Apiary of Mr. J. S. Scott, at Springville, Utah.—See page 100.

In the dovetailed supers I use section-holders. They never sag, with me, and I prefer them to T tins, because the sections are not so badly soiled, especially on the bottoms; and with these, and a thick-top frame, it is very seldom that a queen, no matter how prolific she is, will go up into the sections to lay. Consequently, no honey-board or queen-excluder is needed.

I like the Hoffman frame, as now made, better than any frame I have ever used, and I do not think ⅞ of an inch is any too thick for the top-bar, although ⅝ may answer as well, but it suits me very well as it is. I know that some think those using thick-top, self-spacing frames will change back to the old style loose-hanging frames, and use a honey-board. If I ever change back to this arrangement it will be because I cannot possibly get the former, and I do not think this will ever happen, as I have always found manufacturers able and willing to make a frame, or anything else, exactly as I wanted, if I had the money to pay for the same. But if they ever combine, or form a trust, and try to make us take what they think is best, or want to sell, I will buy a buzz-saw, and a little engine, and make what I want myself.

But for all I have said, I think the sectional brood-chamber hive is the hive of the future, especially for the professional. I have used this hive, and the longer, and more of them, I use the better I like them. I think that honey can be produced in this kind of a hive with less work than any other. But at the same time I have found that one has to know what to do, and when to do it, to obtain good results with this hive. I think that beginners, and those who have not had much experience, will be much more apt to succeed with a single brood-chamber hive.

And now about the size. I know that the right size is a big subject, and I am fully aware that this question is being discussed by others who are more competent to talk about it than I. But I am going to give my opinion of it. I have used hives of 8, 10 and 12 frame capacity, Langstroth size; and also a number of 9-frame hives that have a frame 13 inches long and about 11 inches deep. I have a few of these hives now; they are not bad hives or frames by any means; but all things considered, I prefer the Langstroth size to any I have used.

Almost all who are discussing the size question, seem to think that the locality has the most influence about the right size. I think that the plan on which the apiary is run, and also how prolific one's queens are, has as much, or more, to do with it than the locality, and, with me, locality would not make any difference whatever.

To illustrate: A bee-keeper in a certain State says that in his locality they have only one flow—a colony must gather all surplus and winter stores at this time; and that 8-frame hives won't hold enough stores for 9 months in the year. They would hold all, and more, than I would want them to if I were in such a locality, for instead of having so much honey stored below, I would want it carried above, and put in the sections, and then in the fall I would feed them sugar syrup, and the next season, before that one flow commenced, I would try to have the brood-nest pretty well filled up with sugar syrup again. But, of course, if one did not want to feed, 8 frames would not be large enough for this locality, and if one does not wish to feed, or has not time to give the bees all the care and attention they need, I do not think an 8-frame hive large enough for any locality, unless it be one like I was reading about the other day, that had a flow nearly the entire year.

I do not like hives as large as the 12-frame—in my opinion 10 Langstroth frames are large enough for any locality. I know that some advocate a larger hive than this, and especially my illustrious fellow-countryman, Mr. Dadant. I have not the least doubt that Mr. D. knows more about bees and hives than I do. He has also had more experience, but with the best queens we now have, it is a mystery to me how we can obtain more honey from a larger hive than the 10-frame Langstroth, to say nothing about the extra money invested in such hives and combs, and the heavy work of handling such ponderous hives, which is a big item, if hives are to be handled much.

Now I *think* that I have some queens that are as good as there are in the world. A few years ago I would have said that I had some of the best, for I had been buying the best queens I could get, and improving my bees until I thought they were as good as could be had; but two years ago last spring, by a mere accident, I became possessed of a number of colonies, the poorest of which would double discount the best I then had, and there may be others even better than these; but with these queens, and the best I can buy regardless of price, and with all things carefully considered, I prefer the 8-frame hive, and I can make more money with, say 1,000 frames in 8-frame hives, than with the same number in 10-frame hives. This would, of course, require more queens, but a few queens are a small matter now-a-days. It would also require more hives and more work, but we must have a worse season for honey than I have yet experienced if I cannot get interest on all money invested, and fair wages for all work that is necessary to be performed in the apiary and connected with it. Southern Minnesota, Dec. 18, 1894.

Report of the Michigan State Convention.

BY W. Z. HUTCHINSON.

(Continued from page 85.)

In the evening of the first day Mr. L. H. Ayers, of the firm of Ayers & Reynolds, came up and read the following essay on

The Marketing of Honey.

When I wrote your Secretary, I told him that I had never delivered an address or written an essay, but I was willing to give you an informal talk on "The Marketing of Honey, from a Dealer's Standpoint."

I do not expect to bring before you anything very new, in fact some of you are probably as well posted on this subject as myself; but I will not weary you with preliminaries, but proceed at once to my subject.

Of course the first essential is quality—this I assume to be largely beyond your control, therefore I will not dwell on this point. In speaking of quality, I refer more to color than flavor, as purchasers do not sample comb honey when buying.

Next in importance is neat and attractive packages. The Detroit market prefers packages holding 12 or 16 sections. These packages should be made of bright, clean, light material. It is unnecessary for me to go into details, as this subject is so fully discussed among you that anything I might say would seem superfluous. I would recommend, however, the use of thin strips on the bottom of the packages for the sections to rest upon, so that in case of any leakage, the sections are kept clean, and do not adhere to the bottom of the case. This is not original with me, but is already in use by some of you.

I would also recommend the use of labels—a plain one, with gross weight, tare, and net weight; the second, neat and attractive, with the packer's name thereon. These labels should be on the ends of the package—not on top. This last label ought to be a guarantee that the front row is a correct sample of the entire package.

Allow me to say right here that it is difficult to sell any goods that are marked No. 2 or No. 3. In order to avoid this, I would advise different labels for different grades. This could be done by simply using, say a blue label for white honey, a red one for amber, and a white for the dark. One party to whom we made this recommendation last season, has adopted the plan, and from our standpoint it is a success.

In regard to shipping honey, our experience warrants us in saying—Don't ship by express. Don't nail it up in tight boxes, like hardware, and think because you mark it "Honey; this side up; handle with care," that it will be handled carefully, and arrive at its destination in good condition; for a tight box is as liable to be stood on end as any other way, notwithstanding the caution marked on its cover. Honey shipped in single cases, with glass at the end, showing the contents, will frequently reach its destination in good condition, but the safest and best way is to pack it in cases holding about 12 small cases. The sides should be made of slats so that the contents will show through the glass ends of the small cases. The large outside cases should have projecting handles so that they would be carried by two men—not trucked. About an inch of straw, packed solid, should be placed in the bottom of each case.

Honey should be so loaded in the car that the sections will run lengthwise of the car.

Last but not least, allow me to impress upon you the importance of reliable packing, and a correct statement of the grades and amount—as nearly as possible—of each grade, when offering your honey for sale. No dealer feels like offering full price for goods unless he is confident that they will turn out exactly as represented. We have frequently gone to the depots with parties to look at their honey, after they had represented to us that it was all white stock, all nicely sorted, full sections, etc.—in fact everything that was desirable—but upon examination we have found more or less of it that was sadly deficient in some way or other. Upon calling the party's attention to it, some excuse would be offered—perhaps that there were a few cases that he had got of one of his neighbors, and supposed that it was all right; or, perhaps, the excuse

would be offered that the hired man, or some of the boys, had packed some. This "some" is usually an unknown, or at least indefinite, quantity. After finding a few cases that were not as represented, the dealer loses confidence, and will not purchase except at a low price.

In closing, I will say that marketing honey is very much like marketing any other commodity—give people good goods, honestly and neatly put up, and delivered in good condition, and you will have no difficulty in realizing the best figures the market will warrant.

I omitted to state that the same care should be taken in handling your amber and dark honey that is taken with the white. L. H. AYERS.

In reply to a quesition, Mr. Ayers said that extracted honey was hard to handle. He probably sold twenty-five times as much comb honey as extracted. There was a lack of confidence in extracted honey, and when it candied, people thought it was impure. California extracted honey had given the best satisfaction of any extracted honey that they had handled. It was put up in uniform packages, (the 60-pound tin), was always white, and could be bought at a low price.

Mr. Aspinwall—I presume that you have had some experience in selling honey to manufacturers, such as tobacconists, bakers, etc.

Mr. Ayers—I have tried selling it to tobacco men, and have sold them some, but the trouble is that the retail dealers *will* keep their tobacco where it is damp, so that it will "hold out in weight," and the result is that the honey ferments and spoils the tobacco. Candy-makers use very little honey. Bakers use some, but they scour the whole country to find honey that can be bought way down, down, below what we can sell it for. Brewers will not admit that they use it at all. I must relate one little incident of my trying to deal with a druggist. I received a lot of broken comb honey, and the only way to use it was to melt it up, take off the cake of wax that rises to the top and sell the balance as extracted honey. I did this myself and put the honey into a wooden firkin. Soon after, a drug clerk came in and asked if we had any extracted honey. I took him back and showed him this honey and gave him a sample. Later I called at the store, but was told that the honey was not wanted as it was adulterated. I told them that I took the honey from the combs myself and knew what I was talking about, and that it was pure honey if ever there was any. That made no difference, they said that their chemist had tested it and found it impure, besides, he had applied the cold test and it failed to granulate (?). I told them that they need not buy the honey, but it was pure and I knew it. In a few weeks another customer came in and inquired for extracted honey and I took him back to show him this lot of honey, when, lo and behold, it had candied solid! I tell you, I have mighty little faith in these chemists and food commissioners. Down in Ohio the food commissioner pronounced some buckwheat flour, that came from one of the largest manufacturers in the world, as adulterated. The manufacturer brought suit for $20,000 damages, and then the food commissioner took it all back, and said that "the boys" in the office did the work while he was away. Now the manufacturer is sending out circulars broadcast with this "retraction." The influence of such food commissioner must have considerable weight(?)

Mr. Koeppen—Did you ever try having shippers put paper in the bottoms of the cases to keep the honey from dripping through if it should leak from the sections?

Mr. Ayers—I don't know as I have, but I should think it might be a good thing, if the paper would absorb all of the honey. The trouble is that the honey leaks out of the case and daubs the one below it.

Mr. Hutchinson—Some have used heavy manilla paper that will hold the honey, and have folded it in the shape of a shallow tray that would just cover the bottom of the case.

Mr. Ayers—I should think that that might be a good scheme.

Mr. Aspinwall next gave a talk upon the

PREVENTION OF SWARMING.

Some of the readers of the American Bee Journal may remember that several years ago, Mr. Aspinwall invented machinery for the making of wooden combs, and expected that their use would prevent the rearing of drones, and in this way swarming would be prevented. For several reasons the use of wooden combs and the results that had been hoped for were not successes, but their use led to an arrangement that promises to prevent swarming. Mr. Aspinwall had upon exhibition a hive arranged for the prevention of swarming. In the spaces between the combs are placed half-inch boards perforated with holes large enough for the bees to pass through; in fact, these boards are really halves of the wooden combs, but with no septum. The theory is that swarming results from a crowded condition of the brood-nest, and the introduction of these wooden combs, or half combs, doubles the standing-room in the brood-nest. Besides this, it has been claimed that bees do not swarm when there is storage-room in the brood-nest, and it is possible that the bees look upon the half, wooden combs as unfilled cells, but no honey is stored in them because the cells have no bottoms. It matters not whether these theories are correct or not; at least, we are not so much interested in them as we are in knowing that seven colonies treated in this manner last year did not swarm, and stored an average of 30 pounds of surplus to the colony, while seven other colonies by their side all swarmed and stored almost no surplus at all. These separating boards are not put in until just before the swarming season and are taken out again after it is past. Mr. Aspinwall has patented his invention. Next year it will be tried by a few well-known bee-keepers, and also at the Michigan Experiment Apiary.

Next came an essay from Mr. James Heddon, which was read by the Secretary, on

Apicultural Literature.

I was so very anxious to attend this meeting, and consequently determined to do so, I thought nothing would stop me except sickness; but in that I was mistaken. I have two offices down town; the lease for one of them expired, and unexpectedly I was compelled to move, and to reasonably oblige my successor, I found it impossible to leave home.

I hope I may read in the report of your cogitations, that you have honestly, earnestly, fearlessly, conscientiously and faithfully considered the subject given me—a subject which I believe demands the immediate and serious consideration of honey-producers. While it is a fact that the apicultural literature you purchase costs very little, compared to your income and out-go, at the same time its influence upon your success or failure, is *immense*. Any business can be correctly judged by its literature.

Were I looking toward no interests except that of supply dealers and professors connected with our business, I would have no fault to find, for the present condition into which our literature has degenerated, answers their purposes very well; but when we come to consider the financial interest of the spinal column of our business—the honey-producers—he is getting fearfully little besides that which is misleading, as compared with our literature of years ago. We had but little in quantity then, but the quality of it, considering the status of apiculture at that time, was certainly infinitely superior to what we have now. It seems to me that the good old American Bee Journal has fallen into nothing but an echo of Gleanings. We all know that its editor is not a bee-keeper, having no practical knowledge of the business, and that Gleanings' editor (a bee-keeper of over 20 years ago) has so exchanged the practical for the theoretical, that it would be just as well for us had he never produced a pound of honey. It is impossible for these men to either write or select first-class articles.

On page 658, of current American Bee Journal, is an article by C. Davenport, and while we cannot endorse all of it, we have no doubt but that it is really the best article appearing in that journal for the year 1894. Perhaps not the *best* article, either, but surely *one* of the very best, and the whole tone of it bears positive evidence of the honest, practical, bee-keeper, and that is saying a great deal. Any literarian would know, after reading that article, that C. Davenport will succeed as a honey-producer, anywhere, and that he prints facts, and not falsehoods or fancies, in every line. Now, the editor of the American Bee Journal, no doubt, headed the article, which is as follows: "Something from a Big Bee-Man." In the second line it is stated by Mr. Davenport, that his apiaries contain 367 colonies, and those figures account for the adjective in the heading. Further than that, Bro. York did not go, because he did not see. In his closing paragraph, Mr. D. says that some time he will tell us all about the kind of hive he uses, how he controls swarming, about different varieties of bees and their improvement, together with how they are degenerated under some of the popular plans for the suppression of swarming. Not a word of comment by the editor. No invitation to come on with the articles; not a public invitation to encourage such a writer; and all because Bro. York didn't know; he isn't a honey-producer. [See editorials on page 104, beginning, "Mr. C. Davenport's Article," and "My Bees and Honey."—EDITOR.]

On page 932, of Gleanings (1894) begins an article under the caption, "Locating and Managing Out-Apiaries." Then the sub-head, evidently filled in by Bro. Root, reads as follows: "A valuable and practical treatment of the subject, from a practical man." This article is by E. France, and in

a few foot-notes, the editor praises the article and the man to the skies, and on his editorial page, 952, the first words he says are: "Don't fail to read the article by E. France in this number. It is long, but good in proportion to its length."

E. France is no doubt a practical and successful honey-producer, but from that article it is evident that his success rises more from things he can do, than from those he can tell. Bro. Root offers no criticism. Mr. France says 30 to a 100 rods from the public road is proper to place an out-apiary. He says 25 cents per colony, per year, is the right rental to pay a farmer for the use of ground on which to place an apiary. He advises quadruple, chaff-lined hives, the brood-cases containing each eight Langstroth frames, using three in summer and two in winter. He clips all the queens' wings. He advises taking out all the frames and placing the brood in the lower story, also looking them over every ten days, to make sure no queen-cells are being started in any colony. If the printer has not misrepresented Mr. France, he advocates about 60 pounds of honey per colony, for winter stores. Now, brother honey-producers (for I suppose most of you are practical men) where an editor is a great commentator, and can write whole columns in trying to explain how it was that Bro. Taylor's bees took more kindly to the Given than to the Root foundation, should he not have seen these misleading points and kept them from confusing, or much worse, *misleading*, his readers? But Bro. Root is not a practical bee-keeper. He does as well as he can, under the circumstances; his time is very much absorbed in other matters, and sometimes when we stop to consider the many lines of thought and work he is engaged in, and of the voluminousness of his writing, do we not wonder that he is sure of anything?

Now, I wonder if some of you are saying; "Heddon's gloves are off again; how can he be so harsh?" Why, gentlemen, I am not harsh, I am only truthful. The above statements are not from choice, they are of *necessity*. It is a condition and not a theory, that I am dealing with. I am writing what I believe, and what it seems to me I know. We have other bee-journals whose editors are hardly more practical, and I am not blaming them because they have chosen the editorial field in our pursuit, but I am trying to tell how it *is*, as it seems to me, and to suggest to you one of the principal reasons why our literature is so degenerated. [See editorial on page 104, on "Apicultural Literature."—EDITOR.]

"One of the reasons," I said. Yes, there is another one. There has recently grown up among us, a sort of a "mutual admiration society," as some astute writer named it. The members not being able to do much in discussing and criticising the *work* of bee-keepers, have begun criticising the bee-keepers themselves? Some of them have bronght the blackmailing business to bear upon some competitors, while at the same time, to make that work stronger, they have been creating pets and dragging their sickening eulogies into their trade journals. Of late, quite a proportion of the space in our journals has been devoted to little personalities, and a perfectly disgusting attempt at humor. Wit and humor are the spice of life, but a flat, silly attempt at it, an attempt which proves a failure, is the most disgusting matter with which type can disgrace the clean, white surface of paper. This same principle has absorbed our bee-conventions, because that class of people attend them in a greater proportion than any other. In the call for our late North American, Secretary Benton states that "the association was never in a more flourishing condition;" that we are teaching foreign nations the art of honey-producing; and that many good fields are unoccupied, and still greater things may be expected. Now, can any bee-keeper arise and tell this convention just who, where, when and how, some one is to be benefitted? Wheu you finally find out, won't it turn out to be some editor, professor or salaried "hang-on"of the pursuit? Can you see where the honest honey-producer is benefitted, and can you *not* see where he is *injured?*

Now, I pray you not to discuss the propriety of telling these truths, but discuss the question itself. It makes no difference who I am, or who you are, or whether we have any little blue-eyed babies or redheaded sister Sallies; we are bee-keepers; we are pursuing a business which commands all the respect warranted by the dignity of honest production. We desire to live; we want the necessaries of life; we should have some of its luxuries; if we shouldn't, who should? Why should the man who produces nothing, spending all his energies in the transfer of property, live in luxury, while our families dare not entertain an aspiration beyond the actual necessities of life? Why doesn't our pursuit stand upon a better basis? Why is it more difficult to make a living out of our business now, than it was 10 and 20 years ago? Why have honey-producers only one Adam Grimm, while supply dealers count their successes by the score? There is something wrong, and our literature is mainly at the bottom of it.

By this time, some one is asking, "What do *you* propose?" First, put your foot on the mutual admiration business. Second, discuss principles more and men less. Third, have no aristocracy among bee-keepers. Take off your hat to no one. Fourth, use your reason, rather than your emotions. Let no man be oily enough that you take his falsehoods for facts, nor out-spoken enough that you throw away his truths.

Hoping that the foregoing hurried and disconnected thoughts may serve simply the purpose of awakening to a discussion of the most important problem now confronting bee-keepers, I wish you all a happy and prosperous 1895.

JAS. HEDDON.

The foregoing essay was then discussed as follows:

Pres. Hunt—Mr. Heddon always has to hit somebody pretty hard.

Mr. Taylor—Yes, and I like him for it. If there is any necessity for hitting, let's hit hard.

Mr. Aspinwall—I must say that there is a great deal of truth in what Mr. Heddon says. I am opposed to the side-issues in our bee-papers. Religion is all right—I believe in it, and am a member of a church, but a bee-paper is no place for sermons. I am also interested in health and good living, and I take a journal devoted to that very subject that is far superior to anything that the bee-papers can afford to secure and publish. Then there is one more point: Some of the prominent writers are good men and good bee-keepers, but they "have written," have told their story, so to speak, yet they keep on writing, and the straits to which they are reduced to furnish "copy" make their writings very tiresome.

Mr. Taylor—Yes, but we must remember that some of the papers try to give us the worth of our money in bee-literature, and these side-issues are extra.

Here, again the discussion drifted into

FOUL BROOD.

R. Graden, who had a discussion sometime ago with Mr. McEvoy, took the ground that when a colony infected with foul brood was robbed, the infection was not carried with the honey. Or, if a swarm was shaken from their combs into a box, and then swarmed out and circled in the air, they would be free from foul brood. He thought that in some way this circling in the air freed them from the disease. He thought that foul-broody honey, extracted and fed to bees, might carry the disease with it, but if the bees carried it from the combs, such would not be the case. He related two instances where a colony was having foul brood, was robbed and the colonies doing the robbing did not contract the disease. Upon inquiry it was found that in one case it was late in the fall, and Mr. Aspinwall suggested that the honey was all consumed before the beginning of the breeding season in the spring. In the other case Mr. Aspinwall thought that the honey might have been carried directly to the supers and that none of it ever reached the brood.

Lansing was chosen as the place for holding the next convention, and the following officers were elected: President, M. H. Hunt, Bell Branch; Vice-President, R. Graden, of Taylor Center; Secretary, W. Z. Hutchinson, of Flint; and Treasurer, L. A. Aspinwall, of Jacksoo.

W. Z. HUTCHINSON, *Sec.*

Wintering Bees Out-Doors in Utah.

BY J. S. SCOTT.

In compliance with a request I will try more fully to describe my method of preparing bees for wintering out-doors. The picture of my apiary (see first page) will enable the reader to see more clearly than I could otherwise make it.

I hive all my bees in 8-frame dovetailed hives, on 2x4 scantling placed on the edge with a cleat nailed on each end, and one in the middle just long enough so the front cleat of the bottom-board of the hive will drop over the edge of the front scantling, and the back cleat come to the middle of the back scantling, thus leaving half the thickness of the rear scantling exposed (the purpose of which I will explain further on). This leaves the hive ¾ of an inch lower at the front than at the back.

Between the scantling I fill level with lime, ashes, cinders or slack coal (dust from the coal yard)—the latter I find the best, as I am never bothered with ants. I allow about 28 inches of scantling to the hive, and when it begins to grow cold in the fall, I move the hives toward the center from each end about six inches per day, if the bees can fly a little, if not, I do not move them quite so fast, but give the bees time to

keep up with the move. I finally have them jam together, and if a space is left I calk it with rags in front.

I fill a cushion with sawdust large enough to fill the super ⅜ full, which I place in the super over the brood-nest after removing the waxed cover, and if the little pillars of wax are present, I spread on a burlap, on which I put the cushion and super. The little pillars are useful, as per Doolittle. If none are present, I place over the frame two or three small sticks to allow the bees to pass over the frames. I then nail boards on the scantling at the rear of the hive, and at the end of the rows, which reach up to the middle of the super. This leaves an inch space which I fill with leaves, chaff, sawdust, or any dry material. Over all I place the cover as shown in the picture, and the job is complete.

The operation of moving the hives in the spring is the same as in the fall. Caution—don't move them apart until near swarming time, for you will have brood on the outside of the outside frame, which will chill if moved too soon. This I learned by sad experience. My theory was that of mutual warmth, hence less feed, heat more regular, and not subject to sudden change in the spring, earlier breeding, and most important of all, that the cold coming in at the 6-inch entrance coming in contact with the heat of the cluster would condense near the front of the hive (always to the south), and if very cold, freeze there, when on the first day of sunshine it would melt and run out. By experience all the above has proven true. I had not one moldy comb last spring. For one such comb I offered the bee-inspector $5.00, and he failed to get the prize.

Now for the faults of my method: If there is foul brood in the apiary, young bees are apt to distribute it in the spring. Some may say that the end hives get the most bees. Others may say there will be more robbing, and still others that young queens are more apt to get lost on their return. This latter I grant, but as to the other objections I will give my experience for five years. I never had a hive robbed. I have had only 2 hives with foul brood, and this only light cases, upon which I adopted a heroic cure, and they went up in smoke. I never noticod that the end hives were stronger in bees than any others. I have no winter losses to speak of.

I would like very much to be able to express my admiration of some of our noble giants in bee-keeping, and to thank them for nearly all I know about the business, for by their help I have succeeded to my entire satisfaction, never having had a season that my bees did not pay me as much as $6.00 per colony, spring count. My wife (whom I allow to say what she pleases, for the same reason that I allow my bees to swarm) calls me a big bee-crank, and I am inclined to think she is right, as usual.

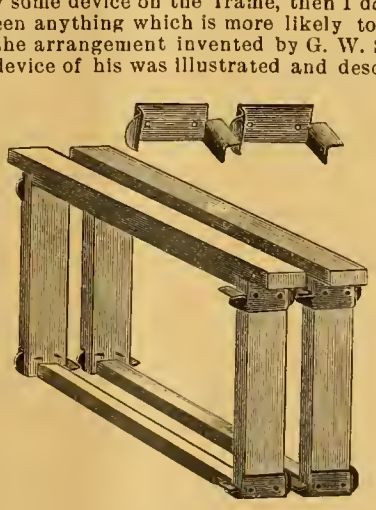
Springville, Utah.

The Production of Comb Honey.

The third of a series of articles on this subject.

BY EMERSON T. ABBOTT.

If frames are to be so arranged that they will space themselves by some device on the frame, then I do not know that I have seen anything which is more likely to give satisfaction than the arrangement invented by G. W. Stephens, of Iowa. This device of his was illustrated and described in the



The Stephens' Frame-Spacer.

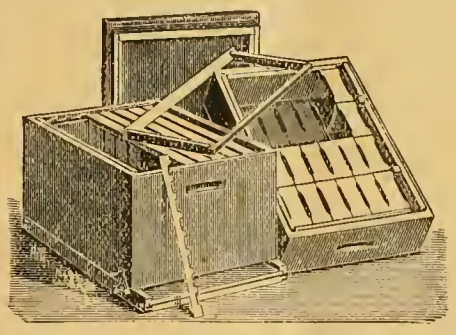
American Bee Journal last summer. I think the cut presented herewith will give a clear idea of it without repeating the description.

But why use any kind of a spacer on the frames? This only adds to the cost of the hive, and makes it more difficult to handle the frames. I would be forced to reject any kind of a device that increases the care necessary in order to manipulate the frames successfully.

"It is evident that profit can be derived from bee-culture with almost any style of frame; but it is certain, also, that in every pursuit some conditions produce better effects than others, under the same circumstances."—Dadant.

THE CONDITIONS THAT PRODUCE THE BEST EFFECTS

for me, and give me the least trouble are such as are shown in the hive illustrated herewith. The frames are the ordinary



Langstroth with a top-bar 1⅛ inches wide, and they hang in metal spacers which space them so there is just ¼ inch between them at the top. One of the spacers is here standing against the front of the hive. This hive could no doubt be very much improved, but that might add to the cost of it, and that would not do in these times.

I think the metal corners as made by The A. I. Root Co. would add materially to the ease of manipulation in this hive. I did not like them when I used them on a plain metal rabbet, as they would slip so easily; but with a metal spacer there would be no trouble of this kind. These metal corners combined with the Root thick top-bar would be still better, but I see that they say there are "practical difficulties in the way" of using them on a thick top-bar. I do not know how this is, as I have not looked into it, but I am sure if the "difficulties" can be overcome that this will make a first-class frame to be used with a metal spacer. However, others may prefer the Hoffman frame, and I am perfectly willing they should, now I have had my say.

In this hive, the ends of the parts are square, and, as I said before, I do not like a square joint between any of the parts of the hive. Others do, and they are in the majority; and, as hives are made to sell, a wise man lets people have what they want to buy, as I said when speaking of comb honey.

If half, or more, of one of the sides of the super was movable, the sections could be removed with much less trouble. I think Mr. Armstrong, who then lived at Jerseyville, Ill., once sold a hive made in this way.

Some hives have wooden spacers of this kind, but they are very objectionable, as the bees stick the frames fast to them, and they split off in removing the frames, and are soon worse than none.

While on the subject of frames it may be well to mention another construction which is radically bad. I refer to those hives in which the frames extend over the end of the hive with wooden spacers nailed on the inside. Such frames are very apt to be stuck fast to the end of the super where it touches them or has less than bee-space between it and the frames. When one attempts to remove the super, the frames all come up with it. Then, it is much harder to keep the bees down on the combs when the hive is open, as they crawl out between the frames where they rest on the end of the hive. Neither can a bee-escape board be used on the brood-chamber of such a hive without an extra rim—a very serious objection.

THE PLACE FOR THE ENDS OF THE FRAMES

is inside the box that forms the brood-chamber.

I may as well confess here, before I go any farther, that I do not think the Langstroth frames leave the colony in as good condition for wintering as would a deeper frame. I am now thinking only of the best frame for the production of comb honey, as I have solved the winter problem by a method that gives me but little trouble with any frame.

In these days when we are not handling frames as much

as we did, some of the objections previously offered do not have as much force as they once had, but there are times when it is very necessary to be able to remove the frames with the least amount of trouble. The Hoffman frames are very apt to be the same as one frame about this time, as they are sure to be all stuck together with propolis, or at least they would be in this locality. St. Joseph, Mo.

[To be continued.]

Something About Deep Frames.

BY J. A. GOLDEN.

On page 817 (1894) I notice an article by Mr. Dadant, on "Selection of Hives," which caused me to go back to when I first commenced bee-keeping, and look up a feature he endeavors to bring out, and I am compelled to admit, from his reasoning and my former experience with the frame then used, that Mr. Dadant is undoubtedly correct, where he says, "Frames should be of sufficient depth to give the queen a good-sized circle on each; also sufficient length, giving ample room," etc,, is good reasoning, and will especially prove very beneficial in the wintering problem. As, for example, when I went into the bee-business I had never seen a bee text-book, or a bee-paper, and, like many other men, I had my own peculiar ideas as to hives. I purchased some nice lumber, and having had some experience in using carpenter's tools, I built a number of hives, each receiving 8 frames 11x15½ inches, inside measure, and it wasn't long until I had rousing big colonies, and, in fact, I took as high as 120 pounds of comb honey in sections from one hive.

I got text-books, Alley's "Hand-Book," Root's "A B C of Bee-Culture," then Gleanings, and other bee-papers, and I soon found that my ideal frame wasn't a standard frame, and the books intimated that if an apiary contained any other but the standard frames, it would be a great barrier in selling bees.

Thus, after some six years I was induced to slash out those beautiful large combs and transfer them to the Hoffman frame, Langstroth size, and then I began to have winter losses, never having lost a single colony while using my former larger and deeper frame. Of course, when full, they were more difficult to handle than the standard size.

After reading Mr. Dadant's solution of the hive problem, I went to a room where I still have quite a pile of those frames, and as soon as I began to examine, I said right out aloud, "Dadant, you are correct;" for here is the brood-circle and some three inches of extended cells between the brood-nest and top-bar, and widening towards each end, which contained sufficient stores for the bees during the longest extended cold spell; and this is as it should be, as all know that bees do not consume any great amount of honey until brood-rearing commences, then the temperature is more intermissive, and the bees can feed from any part of the hive. And now, as I look back when examining the bees in the spring, I do not remember lifting a frame but what there was some honey remaining over the cluster, but I do not find it so with the shallow frame, having had bees to starve while the hives contained 20 and 30 pounds of honey of good quality, and in every case not a cell of honey was found over the brood-nest proper, excepting the outside frames, which usually remain untouched until brood-rearing is in an advanced stage in the spring.

There is also another fact that I glean from Mr. Dadant's reasoning, and it is this: When using the deeper frame my bees bred up strong sooner than they have since using the standard frame. Then, I always procured surplus apple honey; since, not any, and as I still have quite a number of those hives, don't be surprised if you should hear a report from them some time in the future.

But here lies upon my desk the "Old Reliable" for 1895, presenting to us a picture of Mr. Dadant and his son, and not only so, but the Journal comes clothed in its new garb, having been greatly enlarged, which, when bound in volumes, will be much pleasanter to handle than the former size.

Reinersville, Ohio, Jan. 8.

Patronize Our Advertisers.—I wish that readers of the American Bee Journal would, whenever possible, patronize those who advertise in its columns. Also remember, when writing to an advertiser, to say you saw the advertisement in the Bee Journal. This will greatly help us and those who patronize the advertising columns of the Bee Journal. It is earnestly endeavored to admit only responsible firms, as the publishers of the Bee Journal will not knowingly encourage frauds or swindlers.

No Apiarist—no matter how few bees he may keep—should consider that he has done his duty by his "pets" until he has learned how to rear queens.—*Doolittle.*

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Sour Honey in Hives.

Not long ago a question was asked about a colony that had sour honey in the hive, and I could give no satisfactory reply. In Gleanings, S. A. Shuck, of Central Illinois, mentions it as a not uncommon thing, always being confined to a very few colonies, which, he thinks, are not able to ripen their honey properly; but why they can not, remains unexplained.

Easy Way of Transferring Bees.

I have several colonies of bees in Simplicity hives on loose frames, with regular combs. I wish to transfer with as little disturbance as possible. How will it do to move the old hive with bees, and place the new hive on top, drum the bees up, then place the new hive on the old stand with a queen-excluder, and the old hive on top, and in 21 days remove the old combs? J. C. S.

ANSWER.—I've done much the same thing, and it works all right, only the queen sometimes sulks for a number of days before commencing to lay, so it will be a good plan if you can put one comb of brood in the new hive, or even part of one.

Deserting the Hives in Winter—Rearing Queens.

1. We winter our bees on the summer stands, and when winter began I had 12 colonies. All had from 25 to 50 pounds of honey stores, and all seemed to be all right up till yesterday (Jan. 18). This is the first good flight the bees have had in nearly two weeks, and it being such a warm, still day they were out all over the place, when all of the bees in two of the colonies came out and pulled for the woods—one in the morning and the other in the evening. I brought them back in a box, and examined the combs well, and couldn't find anything the matter with them. No moths were found in the hives, and they had plenty of honey and young brood, and even eggs in the combs. They had fine looking queens, for I had both queens in my hands and clipped their wings, then put them back into the hives, and to-day they have come out again. Please tell me what is the matter, as I have been keeping bees 8 years and never had them come out with the queen and leave plenty of honey and young brood in the combs.

2. If from any cause a colony should become queenless in the winter, will they rear a queen, if the material is given them to rear a queen with? Here where the weather is so cold, they seldom get to fly more than once or twice a week.

Pike, Tex. J. M. J.

ANSWERS.—1. I give it up. You Texas people beat all creation, and now you're going to start swarming in the middle of winter. It sounds a little like the desertion of hives that sometimes occurs in spring with plenty of brood and honey in the hive. I have suspected that in such cases there was more brood than the bees could cover, and that upset them, but I don't know whether this is of the same character. Can any one help us out?

2, They might rear a queen, but if no drones were flying the queen would be no good. At any rate, bees are not likely to rear good queens out of season.

Transferring Bees—Feeding Flour for Pollen.

1. Is it advisable to transfer bees early in the spring, from their hive into another one containing only foundation, and feed them on honey and wheat or rye flour?

2. Is flour a perfect substitute for pollen?

3. How would you manage to feed them on flour: that is, get them to take up the flour and give it to the brood?

Amana, Iowa. A. F. K.

ANSWERS.—1. Decidedly not. Early in the spring they need to husband all their strength without having any extra draft made upon it, such as drawing out foundation. Old

comb is better for brood-rearing than new, and they need every advantage in that respect.

2. I don't believe anything can entirely take the place of pollen. At any rate they'll not rear brood so well with it. Still there may be an advantage in giving it in spring when they can gather no pollen, even if the combs are stocked with last year's pollen. The fact that they are *gathering* something in that line seems to stimulate them to greater efforts in brood-rearing. If there is no pollen in the hive, and none to be had in the field at a time when weather is fine for outdoor work, then there can be no question as to the great advantage of feeding some substitute for pollen. I don't think flour is the best substitute. I've tried a number of different things, and I think nothing satisfied me quite so well on the whole as corn and oats ground together for horse or cow feed. I feed it in shallow boxes, perhaps two feet square, and 4 to 6 inches deep. Put a stone under one edge of it so as to raise it three or four inches. Then the bees will work it down level, when you will put the stone under the opposite edge. It's fun to see them burrow into it. By night they'll have all the fine parts worked out, and then you can feed the rest to the cows or horses.

3. They'll go at it without any baiting. If they don't touch it they're getting the real thing from the flowers. If you want to hurry them to work on it, bait them with a little honey.

Seed of Honey-Producing Plants, etc.

Where can the seed of the following honey-producing plants be obtained? Catnip, white clover, alfalfa and sweet clover. When should the seed be sown? Will they blossom the first year? Do any of these plants produce dark honey?

E. A. S.

ANSWER.—The seeds can be obtained through any large seed dealer, unless it be catnip. Write to some of the seed advertisers in the American Bee Journal.

Seed can be sown in spring and will blossom the following year. I don't know whether any one has ever secured enough unmixed catnip honey to know its color. The others give light honey.

Purifying Bees-wax.

What is a convenient way to purify bees-wax? I have some dark wax which I want a lighter color. G. D. R.

ANSWER.—Usually beeswax is dark because of impurities mixed with it, such as particles of pollen, propolis or cocoons. These remain mixed with the wax because the wax cools too rapidly to allow them to settle to the bottom. The secret of getting wax of a bright yellow color is to allow it to cool slowly. A large mass will of necessity cool slowly, and if you have only a small quantity you can put a large quantity of water with it. Or you can let it stand in the oven of a stove in which the fire slowly dies out. But don't burn it.

What to Do With Foul-Broody Hives.

One year ago I bought 11 colonies of bees and 13 empty hives. As the owner claimed that they had been used only a short time, and by uniting for winter had been vacated, leaving plenty of drawn out foundation and brood-comb, together with some honey, I thought that it would be a good deal. But, alas! vain hope.

After moving them home, I examined them in April to see how they were getting along, and found several of the heaviest getting scant of supplies; I went to a hive containing the honey spoken of before, and gave each one 2 frames of stores from an empty hive or one without bees in it. As soon as warm weather came, I noticed a very queer smell, and saw numbers of bees fanning at the entrance of these hives. Supposing it to be all on account of the strength of the colony, I let things go and finally found that the combs I had given those colonies were those of a colony that died with foul brood. I found this out by the description of the disease that I had read.

Going to these colonies I found them weak in bees, where six weeks before they were the strongest. But the long and short of it is, that to-day I have only one left to hope on. Yesterday was warm, and only one colony came out, so I was made aware of their condition.

Now come my questions; What can I do with those hives? They are good now, and all painted three coats, and I want to continue in the business, but not till I have got everything safe to start again.

I think I can get bees in old box-hives, and transfer them, if it would be possible to renovate the hives so the disease would not appear in the next lot.

If the party had told me the cause of the vacant combs, I could have been on my guard and destroyed them.

I just had a present of another lot of hives and fixtures, which, upon examination, I found ample proof that they were emptied by the same disease. These were the remains of a very large apiary.

Now if you will give me your opinion of the way to proceed in this matter, I will be greatly obliged. I am a poor man, and cannot afford to destroy these hives, if I can cleanse them and put them in shape again. N. T. S.

ANSWER.—Having no experience with foul brood myself, I can only give you the opinions of others. I think all agree that frames and combs must be burned. As to the hives themselves, Wm. McEvoy, foul brood inspector of Ontario, says to use them again just as they are. A. I. Root says they must be boiled before being used. Boiling kills the germs, freezing does not.

If you had only one colony among a lot of healthy ones, I should certainly advise to burn up the whole business, hive and all. As your capital is in hives rather than bees, I should just as certainly try to use them again. If you can have a big kettle in which you can boil the hives, you will be on the safe side. Otherwise you might try them as they are, not going into so large a number that you will feel the loss severely if the disease should break out again. If four or five work all right the coming season, then you'd feel safe in using the rest another season.

As you are in a foul-broody region, you may do well to get all the literature you can on the subject, including Dr. Howard's little book on foul brood.

For the benefit of others, report as to your success in using those hives.

Could Not, or Would Not Rear a Queen.

I want to ask about a colony of bees that had the queen removed and could or would not rear another in her place. I have not been able to get any light on the matter in any of the bee books or papers I have.

Columbus, O. J. T. H.

ANSWER.—I don't know upon what you want light, unless it be upon the question why the bees did not rear a queen. Without knowing anything about the case, I can only say in general that bees rear no queen when they have no brood of the right kind, and sometimes they take a freak without any apparent reason to do everything wrong-end foremost. There is not entire uniformity as to their promptness in taking the first steps to rear a queen. Some are slower than others, and some may be too slow to make it out at all.

Shading Hives With Hop-Vines.

Is it necessary to furnish shade for bees during the hottest days? Will hop-vines, planted near the hive, answer the purpose? I think the "A B C of Bee-Culture" recommends grape-vines. Why will not hop-vines do as well? M. W.

ANSWER.—Shade, especially toward the north, is more for the comfort of the operator than for that of the bees. Some of my bees get the sun nearly all day long, and it's seldom that they seem the worse for it, but sometimes I am. I like to work in the shade. Last season I had some foundation melt down in sections during the very hot weather, but I've some doubts whether it would have done so in a good year with plenty of bees in the super to keep up the ventilation.

I don't think Mr. Root's grape-vines are a great success for shade. At any rate, I've heard objections to them from those that worked among them. I doubt if you would like either them or hop-vines, unless you have some kind of an overhead trellis to act as a roof.

A good shade for a hive, supposing it's impossible to have the shade of a tree, is to put on a board cover on top of the regular cover, allowing it to project 8 to 12 inches on the south side. Another way is to cover with long grass, putting two or three sticks of firewood on top to keep from blowing away, and this will last the entire season.

The Bee of the "future" will be the one that will gather the most honey, be the most prolific, and, at the same time, the most docile, hardy and industrious.—*Newman.*

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MRS. JENNIE ATCHLEY - - - "THE SUNNY SOUTHLAND."
"GLEANER" - - - - - "AMONG THE BEE-PAPERS."
"BEE-MASTER" - - - - - "CANADIAN BEEDOM."
DR. F. L. PEIRO - - - - - "DOCTOR'S HINTS."
REV. EMERSON T. ABBOTT - - "NOTES AND COMMENTS."

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Editorial Budget.

Apicultural Literature receives a share of attention (more or less deserved) every once in awhile—and sometimes about twice in awhile. The leading and most influential bee-literature of the day never suffers, nor is it helped any, by reason of any unwise criticisms—particularly the kind that abounds in flings and spiteful personalities.

But, I am happy in the belief that those who are competent judges of the matter, concede that bee-literature, on the whole, "was never better than it is to-day."

Having read the literature of bee-keeping pretty thoroughly for the past eleven years, I am free to say that I heartily agree with Editor Hutchinson in the following estimate which he places upon current bee-literature, and which appeared in his Bee-Keepers' Review for January:

Apicultural literature was never better than it is to-day, and this in the face of about the hardest times financially and apiculturally that we have seen in a long time. As journal after journal came in for December, all bright, fresh, well printed and illustrated, and crammed with interesting and helpful articles, I fell to wondering if my own journal appeared as attractive to the other editors as theirs did to me. If it did, I am satisfied. *Bee-keepers have every reason to be proud of their literature.*

The italics in the above paragraph are mine. Please bear those italicised words in mind while you read the essay on the subject of "Apicultural Literature," on page 99 of this number of the American Bee Journal. While a slight contrast may appear, I am sure it will only serve to heighten your own appreciation of the efforts of all deserving bee-editors who are striving to place before their readers only that which is readable, practical and helpful.

Referring to the genuine bee-literature of to-day (not the spurious or fungous-growth kind), I said this in these columns Dec. 20, 1894: "Bee-literature is a human creation—hence, of course, imperfect—but, like everything good, '*going on* to perfection.'" I am of the same opinion still.

The Nebraska Queen says that Mr. G. J. Weakley, of Washington, Kan., has tried for honey-plants Alsike clover, motherwort, sweet clover, white clover, melissa and catnip, and that the best of all is the sweet clover. He thinks that the first three named are the only three plants of the six that are worth sowing for honey-plants alone. He sowed 10 pounds of Alsike clover on 1½ acres, and 25 colonies filled their brood-chambers and gave 100 pounds of surplus honey. He sows sweet clover seed in the spring, in oats, 4 pounds to the acre, but not too early, as it is liable to freeze.

Mr. C. Davenport's Article on the first page, this week, is the *third* that he has written for the American Bee Journal within the past few months. Mr. D. has over 360 colonies of bees, and he makes a success of bee-keeping, so what he says carries with it the weight of extensive and profitable experience. *Last November* I arranged with him to write a number of articles, which fact will account for this paragraph appearing at the end of his first article, entitled, "Something from a Big Bee-Man," (see page 660—1894):

OTHER SUBJECTS.—Some time I may try to tell the kind and size of hive I use, how I control swarming, about the different kinds of bees I have, what I know about bees improving, and bees improving themselves when left alone; also what I think I know about bees degenerating under some of the most popular plans that are practiced at the present time for the suppression of swarming or increase. C. DAVENPORT.

As the large and small hive question has been recently discussed considerably, Mr. D.'s article will be read with much interest.

My Thanks are due, and hereby tendered, all of my exchange newspapers that have given such kind notices of the recent changes and what they are pleased to call improvements in the American Bee Journal. To quote a part or all they said would take up too much room, and so, to be as impartial as possible, I will, instead of reprinting the much appreciated compliments, simply say "Thank you," to them all.

Wintering Bees Under a Hay-Stack.—Mr. R. N. Leach, of Humphrey, Nebr., writes thus about wintering bees under a hay-stack:

I have kept a few colonies of bees for 13 years, but it has been more pleasure to me than profit. I have wintered bees in the cellar, on the summer stands, packed them in chaff, and in a hay-stack. I like the latter best. All of our hay is stacked. The stack I intend to feed last, when stacking it, after I have put on the ground about one foot of hay, I nail together pieces of 2x4 scantling, thus ∧, and set them in a row on the hay, nail a few pieces of boards on the sides, and then stack hay over them. After the hay is settled, cut a hole in, and when ready put in the bees and stop up the hole. I then have the bees in a place perfectly dry and frost-proof. I put chaff cushions on top and wire screens—the cushions to let the moisture out, and the screens to keep the mice from doing any damage. R. N. LEACH.

This is decidedly interesting. Please tell us how long are the pieces of 2x4. When do you put the bees in the stack? and when do you take them out? How many hives do you put in a stack? How many winters have you practiced it? What proportion of the bees lived, and what proportion died? Please let the readers of the American Bee Journal know all about it, won't you?

My Bees and Honey.—Editor Ernest R. Root, it will be remembered, visited me last September, staying over night, and in his "Notes of Bicycle Travel" in Gleanings for Jan. 15, he had this to say about my bees and honey:

That evening, before supper, we took a look over the apiary of the American Bee Journal, situated in the rear of Dr. Peiro's yard. The neighbors at Bro. York's, if I remember, were afraid to have them there, and so the Doctor kindly offered to "take them in." Mr. York very modestly professed to know little or nothing about bees, and wished me to look them over, and assume the role of *instructor*. (Such modesty in an editor who gets out such a good bee-journal is quite inexcusable.)

A smoker was procured, and we proceeded to open up the hives.

"Why," said I, "Mr. York, you have got supers on at this season of the year." (You will remember it was the first of September.) "I would take them off, for surely you do not need them now."

"But they are gathering honey *now*," said Mr. York.

"Impossible," said I.

"Indeed, they are."

On pulling off the covers, I saw sure enough that the bees were putting honey into the sections.

"What in the world can they get around here, almost in the city?"

"I cannot tell you," said Mr. York.

We opened two or three hives, and every one of them seemed to be busy piling in the surplus. In the meantime Dr. Peiro came out and enlivened the proceedings with his easy-flowing wit and banter. After looking over the bees, Mr. York called my attention to the lawns, as we neared Mr. York's home. I presume there were a good many acres in reach of these bees; and the constant mowing and sprinkling allowed the white clover to spring up and yield nectar *out of season*; but on sampling the honey that evening at the table, there seemed to be something besides white clover

which was certainly present. It had a beautiful minty flavor, and in my estimation—and I think perhaps in that of Mr. York—it was as fine honey as can be produced anywhere in the world. A swamp near by it evidently gave the mint taste, so pleasant. I have always considered the Colorado alfalfa, since I first tasted it, the best; but this is fully its equal.

The next morning, having had a delightful sleep and good breakfast, I took the train for Toledo. The bicycle at this point was resumed; and on reaching home, 110 miles was made in nine hours. Thus ends my long trip on the bicycle to the Mississippi, through Michigan.

Mr. E. E. Hasty—the man who furnishes the palatable monthly "dishes" called "Condensed View of Current Bee-Writings" for the Bee-Keepers' Review—says some very wide-awake things about the first number of the American Bee Journal for 1895. He wrote:

Looks very nice, and the whole thing is one of those extra-interesting numbers Friend York has a trick of waking up and making once in awhile.....Very refreshing to find an editor who has manifestly been kicking around in these gloomy times—when we almost expected them all to lie down in the snow, like Napoleon's soldiers on the retreat from Moscow.

That's all right, Bro. Hasty; but if you mean that I have a "trick of waking up once in awhile" and simply "kicking around"—why—well—yes, that's all right if you mean it. But I'll try to keep *awake* more hereafter, so as to be able to continue the "kicking around," especially as the snow in Chicago (Feb. 5) is too cold (20 degrees below zero) to "lie down in" for comfort.

Moths, Bees and Hens.—Mr. J. B. Griffin, of Cat Creek, Ga., sends in the following paragraph, clipped from a cheap paper published in Augusta, Me.:

A device interesting to farmers has been patented by G. Upham. Everybody knows that the larvæ of certain moths are destructive to bees, and undesirable in the hive. These moths are mostly night-flyers. By an ingenious arrangement the bee-hive is connected with the perch for the hens. When the latter go to roost, their weight on the perch actuates the mechanism and closes the door of the hives. When the fowls leave the roost in the morning, the hives are opened automatically.

My, but that's a "chestnut" from away back years and years ago! Some of the older bee-keepers will remember about it, although just now it doesn't seem easy to turn to it in print. It is somewhat doubtful whether such a thing has really been patented, and still more doubtful whether the patent would hold. but not at all doubtful that it's utterly worthless in any case. The fact is, that the moth has a mysterious way of getting into a hive unnoticed, and it is not at all certain that it does its work all at night. An interesting paragraph on page 263 of the American Bee Journal for 1861, bears directly on the subject in hand, and is worth reproducing here. It reads as follows:

THE BEE-MOTH.—Mr. Kaden, of Mayence, placed a second swarm in a new and clean hive, which had just been made for the purpose of this experiment, and set it remote from every other hive on his premises. Daily, at dusk, as soon as the bees ceased to fly, he carried this hive into the dwelling-house, and deposited it in a chamber where moths or millers could not have access to it. On the eighth day, he drummed out the bees, took out the combs (containing pollen and honey, but no eggs or brood), and placed them under a bell-glass, so adjusted that no insect could enter. In less than three weeks, the combs were perfectly alive with worms. As the bee-moth does not fly during the day, and the hive was regularly removed every evening to prevent its entrance at night, and the combs were all newly built, whence did these worms originate?

Queenie Jeanette is the title of a beautiful waltz song, by Mr. J. C. Wallenmeyer, a bee-keeper at Evansville, Ind. Price, 40 cents, postpaid. Send for it, and then learn to sing it.

Basswood Sprouts.—Several have written to me saying they have basswood sprouts for sale, and asking how many I want, etc. *I* don't want any at all. Subscribers to the American Bee Journal in various parts of the country have been asking me where they can get the basswood sprouts, and so I suggested that those having the sprouts for sale would better advertise the fact in the advertising columns of the Bee Journal. As *free* advertising never helps to pay my bills, please don't try to work in anything of the kind in your articles or letters written for the American Bee Journal. Such free advertising references I always cross out with my pencil before the copy goes to the printer.

Another thing: Only those who advertise in the American Bee Journal need expect to see their catalogues noticed after I receive them.

Among the Bee-Papers

Conducted by "GLEANER."

KEEPING CELLAR-BOTTOMS CLEAN.

Instead of sweeping out, Doolittle says in Gleanings that he sprinkles sawdust on the floor, putting on a fresh flour sack full once in two weeks. That helps take up moisture, and keeps the dead bees from being mashed.

REPORTS ON CRIMSON CLOVER.

A. I. Root reports crimson clover, sown the last of September, green as in spring in the middle of January, although it had several freezes almost to zero. On the other hand, the report comes in the National Stockman, from the Ohio Experiment Station, that no successful stand had been obtained, although several attempts had been made.

KILLING MICE IN CELLARS.

Here's a plan that C. Davenport gives in Gleanings; catering to their tastes by giving such a fine lay-out is a new idea, and a capital one:

"You will need three or four old saucers. Tin covers, or any small dishes that are not of much account for any thing else, will answer for this purpose. In one put some cheese that is mashed up fine; in another put some fresh lean pork that is chopped up fine; and if beef is handy, put some of that in with the pork. In the other, put some honey; and if you have both dark and light, it would be well to give them a dish of each kind. Try to suit the taste of all. Season the contents of each dish with arsenic well mixed in; and if these dishes are set around in the bee-cellar, and the contents renewed every two or three weeks, mice will not damage the bees much. It does not cost very much to feed them this way, as one meal is all each one cares for; and if any of you do not care to kill them, it is far cheaper to feed them in this way without the arsenic than to let them help themselves in the hives all winter."

"DOVETAILED" HIVES—FRAME SHOULDERS.

Mr. Morrison is quite right in saying (see page 36) that our dovetailed hives and sections are not dovetailed at all. I believe joiners call them "fingered." But we've had "dovetailed" sections in use so many years that it would be hard to change the name now. The one he illustrates is a true dovetail, although not the kind most commonly in use, and I've seen boxes made with his kind, only instead of the dovetail being a separate piece it was part of one of the two pieces to be dovetailed together. But the boxes I saw were not so strong and did not last so long as those made the common way like our sections.

The plan of having the frame shoulder run clear through to the outside he will find in use in the Aspinwall hive, and I rather think the idea is patented.

With regard to getting frames of greater depth than usual, I've had no trouble in getting manufacturers to make anything to order at any time when not too much rushed. Of course they can't make a small number at so cheap a rate as when in large quantities.

WHERE THE HONEY IS PRODUCED.

The Nebraska Bee-Keeper denies with some warmth the assertion that if a line were drawn from St. Joseph, Mo., east to the Atlantic, and another north from the same point, the territory embraced would contain the majority of the bee-keepers of the nation, and that outside that area it is impossible to hold large conventions. It holds that the number of bee-keepers who produce honey for market by the ton is very much larger outside than inside the given area, also that honey is more commonly used, and that many large and wealthy cities consume tons of honey produced in their own neighborhood that never enter the wholesale market.

THE AMERICAN BEE JOURNAL FOR JAN. 24.

I think "Student" (on page 49) gives by inference an impression that he does not mean to give. He says: "Clear honey in a white comb commands a higher price than the darker varieties, but many apiarists think the latter really preferable, claiming that honey left long in the hive acquires a fine, rich flavor," etc. The inference might be drawn that white honey left on long, changes to the "darker varieties," whereas I think the comb only becomes darker.

Is there no mistake in the statement that, "In general,

colonies may be doubled without affecting the honey crop?" That is true only where long and heavy fall yields occur, and I hardly think such is the case at Philadelphia.

That usually level-headed Secor after truth (on page 50) is perhaps a little "off" about the Higginsville cover. I don't think it was ever claimed that it would blow off less than any other flat cover—and, by the way, I think a flat cover is the hardest kind to blow off. The Higginsville is really a flat cover, seeking to overcome the fault, and the very serious fault, of the single-board cover in twisting and warping out of shape so as not to fit close. The Higginsville keeps in better shape because it's made of three pieces in place of one, and being made thinner toward the edge has less power to curl up.

That man Kennedy (on page 53) seems to know what to leave out as well as what to put in a report.

I'm looking with interest for the answer to Dr. Peiro's conundrum on page 61, why salt on ice makes it melt slower and on a sidewalk faster. In York State it makes both melt faster.

The Sunny Southland.

CONDUCTED BY

MRS. JENNIE ATCHLEY, BEEVILLE, TEX.

A Fine Honey-Year Assured.

I am happy to be able to say that it began raining about daylight this morning, and is still pouring down now (5 p. m.), which insures us a fine honey-year. The earth is well soaked. Hurrah for southwest Texas!

Beeville, Tex., Feb. 1. JENNIE ATCHLEY.

Report of the South Texas Bee-Convention.

BY F. A. LOCKHART, SEC.

(Continued from page 70.)

Mr. W. O. Victor, then arose and gave his experience as a bee-keeper, as follows:

MR. VICTOR'S BEE-EXPERIENCE.

I am like Mr. Graham, and Dr. Marshall—I think bee-keeping is born with the person. I will go back to my boyhood days, and tell how I hived my first bees. I well remember when I used to go out and hive bees in a match-box, and my mother would not know it till she would find the bees under my pillow, and I was quite a small boy, too, but not so small but that I can remember it very plainly. I can remember, too, that mother would find out when I was tinkering with the bees in the meadow, when I would step on one.

When I had grown up to be quite a chunk of a boy, I went out one day, and found a swarm of bees clustered under some grape-vines, and I started forthwith for a hive to put them in, when, lo, and behold, they were living in the tree on which the vines were growing, and I started back home. I met an old darkey on the way, and told him that I had found some bees, and that I wanted him to help me get them out of the tree. He informed me that those bees were his property. Well, I was almost paralyzed, as I would have given almost every thing I had for those bees, and I was not long in buying them; the old darkey went with me, and we soon got them into a hive. Right here I went into the bee-business on a large scale, and the fever was so high that quinine could never reach the case.

I went to buying bees, gathering them from all sources, and running for increase, and I am sorry to inform you that I soon increased out, as I went down hill till I reached the bottom, and had no bees again. You see I went too fast, and my fever was too high for any remedy, and of course I had to fail.

I soon had some more bees and started out more cautiously, and soon ran my bees up to where they paid me. I tell you that it takes lots of hard work and study to get to where we can manage a large yard and make them pay, especially when honey is so cheap as it is now. I now start out with my bees something as the farmer starts out with his farm—I mean to run them for a "bale to the acre," and I push them for all they are worth. W. O. VICTOR.

As it was now getting late, and the committee was not yet rrady to report, a motion was made to adjourn till 9 a. m. the next day, and the committee was to have their report ready by 10 a. m., or by the time a report could be taken from all the bee-keepers, as to how many colonies they had, how much honey, etc.

SECOND DAY'S PROCEEDINGS.

The convention was called to order by the chairman, Dr. Marshall, at 9 a. m., Dec. 28th. The weather had grown worse, and too cold for the factory that day. So Mrs. Atchley cleared her house of furniture, and seated it with lumber, and built up a fire in the fire-place and all went well.

Reports from members were now called for, as the committee on arranging the questions was not yet all in.

REPORTS GIVEN BY MEMBERS.

W. R. Graham—150 colonies, 10 pounds of honey per colony, spring count. I think 10 pounds per hive will be about right for my latitude or country. I am 400 miles north of Beeville. I also sold 500 queens, and made 50 pounds beeswax. My honey was mostly comb. No increase.

F. A. Lockhart—150 colonies, spring count; 25 pounds of honey, half comb and half extracted. No increase. Sold 1,000 queens. We did not have a good year for my locality (New York.)

W. O. Victor, Wharton, Tex.—Spring count, 425 colonies; no increase; 45,000 pounds of honey (¼ comb), and 500 pounds of wax. No increase; no bees or queens sold. I run my bees in four yards. Half my honey grades 1st class, balance amber.

Dr. Marshall—I started the spring of 1894 with one colony, increased to 9. I ran for increase, and did not obtain any honey. I now keep only a few colonies for experimental purposes, and do not care to produce honey. My location is east Texas.

A. D. Lord, Amiret, Minn.—I ran 40 colonies, increased to 70, and took 1200 pounds of comb-honey and 400 of extracted. My honey was all obtained in a very short time, as our flow lasted only a few days.

C. B. Bankston, of Tex.—99 colonies, spring count, increased to 111; 13 barrels of amber extracted honey, 50 gallons each. 1200 queens sold. My location is middle Texas. The honey averaged about 11 pounds to the gallon.

Mrs. Jennie Atchley.—Started in the spring of 1894 with 500 full colonies, run for queen-rearing, and during the height of the season I had about 1500 nuclei. Sold about 4500 queens, and now have 300 colonies. Bought and sold during the season about 60,000 pounds of bees, or nearly 2 carloads. 500 pounds beeswax.

W. G. Camrey, Gloversville, N. Y.—(near Doolittle's locality).—50 colonies, 25 pounds of peppermint honey. My bees are situated near some great lakes.

W. C. Gathright, Cameron, middle Tex.—200 colonies, spring count, averaged 75 pounds per colony—all extracted honey. 150 pounds of beeswax.

The balance of those present had from one to 10 colonies, and kept no count, having come to learn, as they did not profess to be bee-keepers. (*Continued next week.*)

Notes AND Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

"Adel"—"Where did it ever appear, anyhow, before coming up at the convention?" I respectfully suggest that "Gleaner" (see page 25) subscribe for the Apiculturist, or send for Mr. Alley's price-list.

Hardly.—"Any device that will permit a worker-bee to pass while the drones are prevented from escaping, infringes our claims on a drone-trap!"—Henry Alley.

Don't you believe it! How about the entrance-guard, or even a strip of queen-excluding zinc? They will prevent the drones from escaping, but they are hardly an infringement on a drone-trap. We sometimes make the mistake of claiming too much for "our inventions."

No Use to Hunt the Adulteration.—"It seems to me that the Union should do more in the way of hunting out suspected cases of adulteration—in fact, assume the aggressive—that is, employ detectives to follow up a few of the unscrupulous city dealers."—Editorial in Gleanings.

No use for a detective, Friend Root; I can find you plenty of adulterated extracted honey without any detective. Think I could go out in our city and find half a dozen samples bearing the firm name of those who did the adulterating. I seldom go into any large city without seeing clear cases of adulterated extracted honey. It will not require much hunting to find plenty of this kind of work.

The laws of Missouri recognize adulteration of food as a crime against society, which it is, and declare it a misdemeanor, and place the maximum penalty at a fine of $1,000 and one year in the county jail. It is, however, a grave question to know how great is the obligation on a citizen to enforce this law. Should he set about it in dead earnest, he would find all of his time taken up with law. Should he report to the Manager of the Union, and have to appear as a witness, he would get the ill-will of many of his fellow-men, and be mixed up in some things that would not be very pleasant, to say the least. Then, there is another side to this question. Glucose is not injurious as a food, or at least so says the Government Chemist, and it frequently happens that these samples of adulterated honey are more palatable than some of the black, filthy honey put on the market by bee-keepers. So, I am free to confess that while I have nothing but condemnation for any form of adulteration, I am at a loss to know just what it is best to do. When the real article is less attractive and less palatable than the mixture, it comes to a case like choosing between oleo and much of the dirty and unpalatable butter put on the market. We do not want to favor the fraud, neither would we like to be forced to eat the real stuff, if it "comes up in that shape and manner," as I frequently hear one of our city auctioneers say.

Then there is another difficulty about this; it is hard to get all of the bee-keepers to pull together. Friend Alley says: "Bee-conventions"—and this means unity of action—"are no good." We thought the North American a success, but it seems that those who attended that meeting were not a unit, for we are now placed in the humiliating position of having the Secretary withhold the Report, that he may "get even" with some of the members of the association who did not do exactly to suit him. I rather think we had better not start the detective out just yet.

I do recognize the fact, however, that something should be done along this line, I may say further, while I am on this subject, that I am confident that the decisions of Courts, secured by the action of the Union, have been of more benefit to bee-keepers than most of them are aware.

We Agree.—"The prospects are that bee-keepers will continue to multiply, and the industry continue to grow until the ground in the habitable parts is pretty well occupied. This growth will probably not be so much in the direction of specialism as bee-keeping in conjunction with farming, gardening, fruit-raising, etc."—Allen Pringle, on page 26.

Them's my sentiments! That is about the way it will be in this neck of the woods, and that is the way it should be, in my opinion. I hope the day may come when every farmer in the country will keep a few bees in modern hives, and secure enough honey at least to supply his own table, not on Sunday as a luxury, but three meals a day and seven days in the week.

Canadian Beedom.

Conducted by "BEE-MASTER."

Crimson Clover for Bees.

There is quite a furor at the present time among farmers about crimson clover. It is supposed by many to be a newly-introduced variety of clover, but this is a mistake. More than 40 years ago it was in cultivation under the name of "Incarnat clover," so called from its botanical name—*Trifolium incarnatum*—which will be found attached to it in the seed catalogues after the names crimson, or scarlet clover.

It was also known in those days as French clover. English farmers used to consider it a most valuable addition to their list of plants sown for fodder, from the short time in which it arrives at perfection if sown in spring; so that where the common red clover had failed, this was sown to fill up the bare places. But it was most highly valued as a stubble crop by means of which very early feed could be raised for ewes and lambs, with but little trouble or expense. Immediately after harvest, the stubbly ground was scarified and harrowed, so as to raise a mould; the clover was then sown and well rolled in. It stood the English winter well, sprang up early in spring, and soon furnished a bite. If left for hay it could be harvested by the end of May or the beginning of June, being off the ground in time to plough and clean the land for turnips. This old country farm practice has not, so far as I know, found its way into Canada, and it is doubtful if it would work in this climate, which is far more severe than that of Britain. Most likely fall-sown crimson clover was winter-killed, and hence this item of old country farm practice fell into disuse, here in Canada, if it was ever tried at all, which I think it must have been, for the British farmer, like every other kind of Britisher, is posessed with the idea, when he gets across the Atlantic, that he must do every thing precisely as it is done in "Hingland."

Why have I introduced this subject, and why have I headed this article "Crimson Clover for Bees?" Because I have just received a kind of electric shock from reading the following paragraph in Vol. II of the American Bee Journal for June, 1867, page 234:—

"Incarnat clover (*trifolium incarnatum*) is an annual, the blossoms of which yield supplies of excellent honey which is eagerly gathered by bees. When sown in spring on stubble land which was plowed in autumn, it comes into blossom about the last of July or first of August, yielding plenty of pasturage for bees, and producing on good ground a large crop of hay. Sow about half a bushel of seed on an acre. It may be sown with spring barley, but will then come into flower somewhat later. If sown in autumn, it should not be done later than about the beginning of September. It will then blossom in May, and can be mown for an early crop of hay. It succeeds well from loamy, clayey and sandy soils; and is best adapted for mild climates."

The last remark is doubtless made in view of the liability of fall-sown fields to winter-kill in severe climates.

Now this paragraph certainly deserves to be labeled, "Important if true." A honey-plant that will bloom the last of July or first of August is precisely what bee-keepers in northern latitudes are in search of, to take the place of the basswood when it fails. According to the above paragraph, two or three sowings may be made of this clover—one very early in spring on land prepared the previous fall; another with barley, and why not a third, somewhat later still? If this clover will bridge over the gulf between basswood and the late fall flowers we now have, our bees can glide gradually into winter without that long interval of uneasy idleness which gives a sudden check to brood-rearing, and often sends our colonies into their annual arctic ordeal with inadequate numbers for maintaining due warmth in the hive until the advent of spring. Such a plant would be a most welcome God-send to Canadian beedom, and to the tier of northern States that shares our latitude.

I would earnestly advise a trial of this clover by bee-keepers in high latitudes, and would call the special attention of our great horticultural bee-keeper, A. I. Root, to this matter. The question of the suitability and value of this clover as a forage plant for bees, can easily be tested during the coming season, and I hope that a large number of bee-keepers on both sides of the lines will turn their attention to this experiment.

[In one of the seed catalogues I find the picture shown herewith, and also this description, of the clover which Bee-Master has written about in so vivid a manner:—EDITOR.]

Scarlet or crimson clover (*Trifolium Incarnatum*) is the most beautiful of all clovers, readily distinguished by the bright crimson color of its flowers. Exceedingly productive and very palatable to cattle. It is the latest of all the clover family, and thus affords a desirable succession of green food. At present in much demand. Has proved exceedingly valuable, both as a cattle-feeding clover and as a green manure for plowing under. In the latitude of Philadelphia it may be sown any time between March and September. Sow 10 pounds to the acre.

Crimson or Scarlet Clover.

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Do Old, Dark-Colored Combs Affect the Honey?

Query 958.—Suppose I hive two swarms of bees in the spring—one on foundation and the other on old, dark-colored combs—will there be any difference, either in color or flavor, of the extracted honey in the fall? In other words, do old, dark-colored combs affect the honey either in color or flavor?—J. P. S.

R. L. Taylor—No, no.

J. A. Green—Very little.

Chas. Dadant & Son.—No.

Eugene Secor—There will be no difference.

G. M. Doolittle—Not that I could ever discover.

Mrs. Jennie Atchley—No, not at all that I can see.

P. H. Elwood—If the combs are clean, I have observed no difference.

Jas. A. Stone—I never have extracted from dark comb, and cannot say.

E. France—If the old combs are clean, I don't think the honey will be darker.

Dr. J. P. H. Brown—They render the honey darker, and detract from its flavor.

H. D. Cutting—I have extracted very fine honey in color and flavor from old combs.

B. Taylor—I believe not, provided the old combs are free from dark honey to start with.

J. E. Pond—I find no difference, in my experience. It is far different with surplus comb honey.

Rev. M. Mahin—I have never been able to detect any difference in either color or flavor between honey stored in old and in new combs.

Prof. A. J. Cook—Not the extracted honey. If comb honey is placed in combs formed close to old black comb, the comb will be darker.

G. W. Demaree—The age of the combs, if they are sound and well preserved, never affects the color or quality of my honey, taken with the extractor.

C. H. Dibbern—I have never watched this very closely, but I think the honey in the comb built from foundation will be the lightest colored and finest flavored.

Rev. Emerson T. Abbott—I am not sure about it, but I do not think the combs would make any difference, if they have not had brood reared in them. I prefer not to extract from combs in which brood has been reared for a long time.

Wm. M. Barnum—I have never detected any taint or flavor coming from old combs. This answer does not contemplate combs that have been affected with foul brood or mold, however. I prefer combs two to five years old. They are stronger.

Mrs. L. Harrison—I have never noticed any difference in flavor, but I have in color. One year, in order to take extracted honey to the Illinois State Fair, I extracted none except from the whitest comb. Some of the exhibitors thought there was some trick about it, because it was much lighter than theirs. If there was a small quantity of off color, I rejected it, and used only the new, whitest comb.

Dr. C. C. Miller—I've had beautiful, white, fine-flavored honey from very black combs, and yet, if the darkening of combs is by deposition of outside matter, it's just possible such matter is soluble to a slight extent in honey, changing its color and flavor.

W. G. Larrabee—If old, dark-colored combs are clean and sweet, having been used for extracting entirely for several years, they will not affect the honey; but if taken from some colony that has winter-killed, and left full of dead bees or brood, it is liable to affect the honey in color and flavor.

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THE MOST PERFECT Incubator Made. Hatches every egg that a hen could hatch; Regulates itself automatically; Reduces the cost of poultry raising to a minimum. Send for Illustrated Catalogue.

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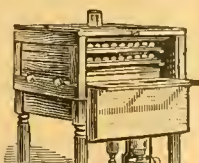

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15Dtf **C. W. Dayton, Florence, Calif.**

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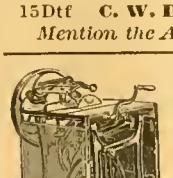

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Always ship the Wax by Express, and prepay the charges; also put your name and address on the package to avoid mistakes.

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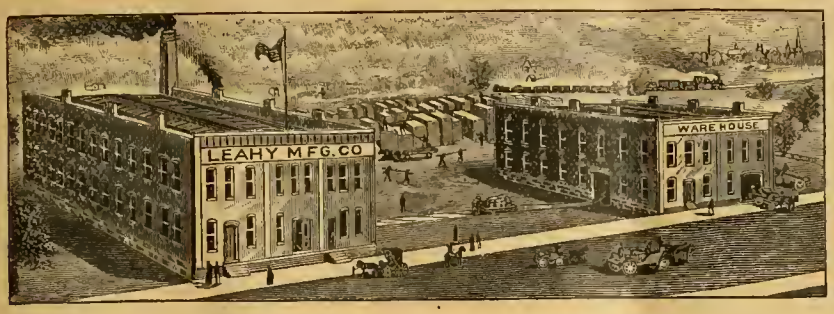

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"I TOLD YOU SO."

MRS. ATCHLEY:—The 19 1-frame Nuclei I bought of you last year with Untested Queens, gave me 785 lbs. of section honey and 175 lbs. of extracted honey, besides some unfinished sections. The best one gave me 120 one-pound sections well filled.
Heber, Utah, Oct. 9, 1894. J. A. SMITH.

Now, didn't I tell you it would pay to ship Bees north to build up and catch the honey-flow? **Bees by the Pound,** on a Comb and Honey to last the trip—$1.00; 10 or more Pounds 90c. per pound. **NUCLEI**—$1.00 per Frame; 10 or more Frames, 90c. each. Untested Queens to go with them [same as Mr. Smith got] 75c. each.

UNTESTED QUEENS—by mail, either **Leather-Colored Italians, 5-Bands,** or **Carniolans**—$1.00 each; $5.00 for 6; $9.00 per Dozen—till June 1st., **then** 75c. each; $4.25 for 6, or $8.00 per Dozen.

TESTED QUEENS—**3-Bands,** $1.50 each; **5-Bands** and **Carniolans,** $2.50 each. **Fine Breeders,** of either race, or **Imported Queens,** $5.00 each. My **Straight 5-Band Breeders,** $10.00 each.

FULL COLONIES—with Untested Queens, $6.00 each.

Send for Prices and Discounts to Dealers, and by the Quantities.

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JENNIE ATCHLEY, Beeville, Bee Co., Tex.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Feb. 7.—The weather has been so cold that it prevented the shipping of comb, and the trade has been light to local dealers. Choice white comb sells at 14@15c. There is demand only for that put up in excellent shape. As a rule, dark grades are slow, prices ranging from 9@10c.; good, light color, 12@13c.
Beeswax, 27@28c. R. A. B. & Co.

CHICAGO, ILL., Dec. 27.—Up to the present the sales on honey have met with our expectations. We have received considerably more honey than we figured on handling, owing to the short crop report, and we think the early shippers reaped the benefit. However, we are now getting the average price, viz.: Fancy, 15c.; white, No. 1, 14@13c. Extracted, 6@7c.
Beeswax, 28@29c. J. A. L.

CINCINNATI, O., Jan. 7.—Demand for honey is very quiet since the holidays, and prices are unchanged. Comb honey brings 14@16c. for best white, and extracted 4@7c.
Beeswax is in good demand at 23@28c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, Mo., Jan. 7.—The demand for both comb and extracted is light. Supply good. We quote: No. 1 white comb, 1-lbs., 14@15c.; No. 2 white, 12@13c.; No. 1 amber, 13c.; No. 2 amber, 10@11c. Extracted, white, 6@6½c.; amber, 5@5½c.; dark, 4½c.
Beeswax, 22@25c. C. C. C. & Co.

PHILADELPHIA, PA., Jan. 31.—Comb honey is very plenty and slow of sale at 12@13c. Extracted in fair demand at 5@6½c.
Beeswax scarce at 27@30c. W. A. S.

BUFFALO, N. Y., Jan. 21.—The honey market is very quiet. We quote: Fancy, 13@14c.; choice, 10@12c.; off grades moving slowly, trade being only on fancy; buckwheat slow at 8@10c. Extracted very dull, at 5@6c.
Beeswax, 28@30c. B. & Co.

NEW YORK, N. Y., Dec. 31.—The demand for comb honey has been very light of late and has now almost dwindled down to nothing. The supply has been accumulating and there is a large stock on the market. In order to move it in round lots, it will be necessary to make liberal concessions from ruling quotations. We quote: Fancy white, 1-lbs., 13c.; off grades, 11c.; buckwheat, 9c. We have nothing new to report in extracted. It is moving off slow and plenty of stock on the market, with more arriving. Beeswax is steady and finds ready sale on arrival at 30c. per pound. H. B. & S.

SHIP Your Butter, Eggs, Poultry, Veal, Beans, Potatoes, Hides, Pelts, Wool, Hay, Grain, Green and Dried Fruits, or ANYTHING YOU MAY HAVE to us. Quick sales at the highest market price and prompt returns made. Write for prices or any information you may want.
SUMMERS, MORRISON & CO., Commission Merchants,
174 South Water St., Chicago, Ill.
REFERENCE—Metropolitan National Bank, Chicago.
6A13t Please mention the Bee Journal.

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Most of whom Quote in this Journal.

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R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.
F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 28 & 30 West Broadway.
CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.

Kansas City, Mo.
CLEMOMS-MASON COM. CO., 423 Walnut St.

Buffalo, N. Y.
BATTERSON & CO., 167 & 169 Scott St.

Hamilton, Ills.
CHAS. DADANT & SON.

Philadelphia, Pa.
WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.
C. F. MUTH & SON, cor. Freeman & Central avs.

Convention Notices.

CALIFORNIA.—The next annual meeting of the Central California Bee-Keepers' Association will be held in Selma, Fresno County, Wednesday, Mar. 6, 1895.
Lemoore, Calif. J. F. FLORY, Sec.

MINNESOTA.—The regular semi-annual meeting of the Southern Minnesota Bee-Keepers' Association will be held on the first Monday in May, 1895, at LaCrescent, Minn. All bee-keepers invited. E. C. CORNWELL, Sec.
Winona, Minn.

UTAH.—The Utah Bee-Keepers' Association will hold their semi annual meeting on Thursday, April 4, 1895, at 10 a.m., in the Fish Commissioner's rooms in the new city and county building, Salt Lake City.
Provo, Utah. GEO. E. DUDLEY, Sec.

TEXAS.—The Texas State Bee-Keepers' Association will hold its 17th annual convention at the apiary of W. R. Graham, in Greenville, Tex., on Wednesday and Thursday, April 3 and 4, 1895. All interested are invited to attend. "NO HOTEL BILLS."
Ft. Worth, Tex. DR. WM. R. HOWARD, Sec.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association on March 16, 1895, at Goodno's Hall, in Bronson, Bourbon Co., Kans. It is the annual meeting, and all members are requested to be present, and all bee-keepers are cordially invited. J. C. BALCH, Sec.
Bronson, Kans.

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Please mention the Bee Journal. Nov15

Knock. That is what DISCOUNTS do. And here is a hard one: Until Mar. 1, a Discount of **5 per ct.** will be allowed on my **LOW PRICES** on

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W. J. Finch, Jr., Springfield, Ill

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Wants or Exchanges.

This department is only for your "Wants" or bona-fide "Exchanges," and such will be inserted here **at 10 cents a line** for each time, when specially ordered into this department. Exchanges for cash or for price-lists, or notices offering articles for sale, will not be inserted here—such belong in the regular advertising columns, at regular rates.

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General Items.

Packed Bees Doing Well.

We have had several cases of zero weather, but the bees that are well packed are doing well. The prospect is now that the bees will come through all right, but how they will "spring" is what will tell the story. The honey crop the past season was generally light, though a few *strong* colonies did well. Quinby's moral—"Have colonies *all* strong"—would help wonderfully, especially in a short honey-flow.
GEO. SPITLER.
Mosiertown, Pa., Jan. 14.

Fine Weather Till Jan. 15.

It was a busy fall with me. The weather has been so fine up to the present—no snow, I may say, until yesterday morning. Bees flew every week up to Dec. 22, flying every day from Dec. 15 till the 22nd. I picked a dandelion in full bloom on Dec. 17, and was going to send it to the editor, but it slipped out of my fingers and dropped into some boiling wax, and it is now a wax flower, well preserved. JOHN MCARTHUR.
Toronto, Ont., Jan. 14.

Results of the Past Season.

The year 1894 proved almost a failure in this section of the country, owing to the dry weather. Many bee-keepers made a total failure. As for myself, I managed to hold out. I had 26 colonies at the beginning of the season, and 2 large swarms on May 7, about one hour apart, which is something unusual in this part of the country. Up to the closing of the season I had 7 large swarms. I put 32 colonies into winter quarters, in prime condition. My honey receipts were as follows: For 1893, 982 pounds; for 1894, 500 pounds; decrease, 482 pounds.

My standing for 1894, up to 1895, is as follows: To general inventory Jan. 1, 1894, $261.22; material secured during year, $13.73; increase in bees (by swarms) $42; total inventory Jan. 1, 1895, $316.95. Net earnings, $68.81. DALLAS MAY.
Saxton, Pa., Jan. 3.

Letter from Hon. J. M. Hambaugh.

FRIEND YORK:—I presume it will not be amiss for me to arise and explain my long silence and apparent unconcern as regards the bee-interests of our State.

In the first place, I will say that I have had a change in contemplation for several years. The principal cause of such a resolution is that of poor health. It has been my misfortune for several years, as cold weather would approach in the fall and early winter, to lose my health, and as the winters pass and the genial sunshine once more approaches, I would become myself again and enjoy good health. This has led me to believe that a warm climate is essential for my well being, and I have resolved to make a tour of California with that end in view.

I rented my farm during the fall, but reserved the right to keep bees thereon, with shop, honey-house and other privileges. I held a sale, sold all personal property, etc., and during the time of our Illinois State Bee-Keepers' convention we were in the midst of a general tear-up, preparatory to moving, and in the melee and excitement I neglected my annual address, and made an effort to put the job on Mr. Dadant, but it seemed to strike him in about as busy a time as myself, which he apprised me of when too late to even send an apology to our brethren then in session at Springfield. That it looked rather "cold" on my part, I must admit, but my heart was with them, all the same, and they probably had a much better meeting in consequence of my absence.

Be this as it may, I am still in the field of apiculture, and should even the far distant sunny slope of California eventually receive me, I shall be found ready to do my mite, be it ever so little, in the interests of apiculture. My labors in the field did not go unrewarded last season in a pecuniary point of view. From nearly 115 colonies, sprint count, my crop aggregated something near four tons of honey, and increased to 130 colonies.
J. M. HAMBAUGH.
Mt. Sterling, Ill., Jan. 9.

Bees Mostly Unprotected, Etc.

The bees seem to be getting along very well so far. They have a flight or two almost every week, as it has not been so very cold yet. I hope this may be a mild winter, and a good year for bee-keeping. Spring is the most trying on our bees.

The bees in this neighborhood are all without protection, as the last few winters were not so severe. I do not know how mine will come out, but I left them without protection this winter. As I had only a part of my bees protected last year, I thought I would let them all go without protection this year. Those unprotected last year came out just as well as the protected. I may, however, still pack a few of them, and, if it is late, better late than never.

I look for a good honey-flow this year, as we had nice rains all during the fall, and I hope we may reap a full harvest. Stick to your bees. That the big honey-flow may not find you napping, better watch.

My best colony produced 80 pounds of comb honey last season. That was good for this part of the State (Cooper county); but a good honey-flow should far overreach it. F. N. BLANK.
Prairie Home, Mo., Jan. 7.

A Few Comments.

Mr. Learned didn't learn what he should have learned (see page 793, 1894). He should learn that the way to get the best honey ever placed upon the market, is to use a 2-story hive with 18 brood-frames in them, and a perforated sheet of zinc between them, and let the bees seal the honey and then extract it, and the larvæ gravy will not be in it. If he has been guilty of putting such honey on the market as this—there is no law against the righteous, but there is against a man who will sell honey with "gravy" in it, and sweeten it up with glucose.

I sold 700 pounds of extracted honey in the country, and did not have half as much as I can sell of the same kind at 8½ cents per pound.

I have also one of those $10 honey queens, but she only cost me $1.50, and it would take 5 colonies of black bees, too, to get her. Black bees do have paralysis. The only colony that died out entirely here, two years ago, was a colony of black bees. They can get up your pant's-legs quicker than the 5-banded golden-egg $10 honey-queen bees can, and that is about all they can do.

Friend L., you will learn a lesson that you'll remember for ages, if that "Texas Ranger" gets after you. I'd like to see it!

I have 43 colonies of bees, all doing well. The weather is fine, and they fly every day. I expect fine results the coming season.

The "Old Reliable" is a dandy.
J. H. BERRY.
Gale's Creek, Oreg., Dec. 31.

Past Season—Selling Honey, Etc.

We had a very backward season in 1894, until basswood bloom. White clover did not amount to anything. Fruit-bloom kept the colonies breeding as long as it lasted. Basswood lasted about ten days, then another rest until buckwheat began to blossom. Then the bees filled up the hives faster than I ever knew them to do from that source, and of a good quality. I got 525 pounds of comb honey from about 20 colonies. Some colonies did not give any surplus. I had only 4 swarms.

I see that A. D. Lord, of Minnesota, reports on page 821 (Dec. 27, 1894), some good

yields from swarms. I had one swarm July 5, hived on starters, which filled its hive (1,152 square inches of comb space) and gave me 38 pounds of nice comb honey, which is not far behind Mr. Lord.

I have no trouble in selling my honey. I make some nice show-cases, with glass in the sides; clean off all propolis, weigh and mark the price on each section, and leave the cases, with suitable instructions, with some of the reliable grocerymen, and await results. "Results"—usually, in a few weeks, "All sold. Any more at the same price?" I have not sold any under 20 cents per pound last season or the present one, at retail. I have had customers for years, living 20 to 50 miles away, that send to me for honey, when I know they can get what is called "honey" for much less price.

A man said to me on Christmas day, "Send me some of your honey. I have bought honey from others, but it was not good." He lived 25 miles distant. A good reputation is a good thing, but a man cannot run a dishonest business long without being found out. Many of my customers come to the house and get what they want.

On page 817 and 818 (1894) I find some ideas by Chas. Dadant, which I think will cause a ray of light to illuminate the darkened understanding of some of our "shallow frame" advocates. I think there is a little common sense in there, but many people, bee-keepers not excepted, look no farther than the present, and "kill the goose that lays the golden egg." Give me the deep square frame for wintering successfully, and for breeding up in spring, for the reasons Mr. Dadant has given, if no other. But there is another reason he has not given. It is a well-known fact that warm air always ascends, let it be animal or artificial; the more stores above the cluster, so much better, making their food more suitable to their wants, and also more easily reached when needed.

But Mr. Dadant also gives his objections to the square frame, viz.: a square frame must necessarily require a square hive also; and a square hive gives little room for surplus honey. Now Mr. Dadant has not seen the plan of the hive I make and use, or I think he would change his notion. My frames are 12½x12½ inches, outside measurement (either 8 or 10 frames in a hive), and so arranged that I have two squares for surplus, brought about by spacing my hive on one corner; the frames also stand on one corner. I have room for from 36 to 49 sections, depending on their width. My bees have a less average distance to reach the frames than they have in the Simplicity hive. This looks strange to some, on account of the square frame, but "figures won't lie."

My study for years has been to get a hive adapted to the natural propensities of the little workers; this is the second winter trial of my hive, before giving it to the public. I have found no objection yet, nor have I found any person (at several County Fairs that I have attended) that has found any fault, unless they had an "ax to grind" of their own. T. C. KELLY.

Slippery Rock, Pa., Jan. 2.

A Dentist's Bee-Experience.

Allow me to thank you, Mr. Editor, for the pleasant surprise on receipt of the New Year's number of the American Bee Journal in its new form and improved appearance. I look forward with a hearty welcome ready for the weekly visit of the Bee Journal.

I have been practicing dentistry on this coast since 1875, and I begin to feel the need of some out-door pursuit, so I am turning my attention cautiously to apiculture, although my first year was attended with loss by fire, which left me nothing but the bees at the apiary, and my second year very little out of a big crop, on account of unreliable parties managing the apiary for me. My third year (1894), which will long be remembered by apiarists in southern California, proved a failure on account of drouth. But I have purchased a few colonies to replace those that starved, and I am going to close my office this spring and summer, take my family and go to the "ranch;" and while we try to help the bees to store honey, we will try to restore our shattered nerves by living in the sunshine and drinking pure mountain water.

Later I may write you again of my failure and disgust (the latter has not begun to crop out yet, but just the opposite—I am more sanguine than ever), or of success and a greater determination to spread "a little more out."

We have at present a bright prospect for the new year, and to-day has been indescribably beautiful, as a great portion of our days are in southern California.

I hope to be able to give a more favorable report at the close of the coming season. G. A. MILLARD, D. D. S.

Los Angeles, Calif., Jan. 8.

Bees Affected with "Grubs."

Mr. Jas. Scott wrote last year in regard to a pecular "grub" or "maggot" found in the bees, and told me the other day that Prof. Cook wished to obtain some of the affected bees with the parasite. My wife was the first to discover them, and found lots of dead and dying bees on the alighting-boards every morning, but can find none at present, and we don't like to disturb the bees, as we have them all under chaff cushions. I am not certain that I can obtain any affected live bees in the spring, but should any die from it then, and Prof. Cook can use them, I will send him as many as he needs.

I shall watch closely, and upon the first appearance of the "grub" I will notify the bee-keeping world, for if it is in reality what I think—a new pest to bees—we want to know what to do to stop or prevent its ravages. It was discovered too late last fall to tell really whether or not it would kill off bees in quantities sufficient to injure the working-force of the hives, but from the size of all I saw, I do not see how a bee could live long with one of them inside of her. S. L. PAYNE.

Westfall, Oreg., Jan. 9.

[If you find the same trouble next spring, Mr. Payne, please send a few of the affected bees to Prof. Cook, Claremont, Calif., when he will report on them through the American Bee Journal.—EDITOR.]

An Old Bee-Keeper.

I used to take the American Bee Journal years ago, east of the mountains, but now I live here in "God's wonderland." I am just past my 80th birthday, and 70 years of bee-acquaintance. I have made here over 150 hives, and transferred from trees, boxes and barrels more than 70 colonies, and I am just as ready for this new year as ever.

I say to everybody in this blessed land, "Yes, you want bees; get some bee-literature, and study God's wonderous works in the bee-hive." A. J. BIRD.

Dos Palos, Calif., Jan. 8.

Prospects Flattering in California.

The prospects are very flattering for a large yield of honey in this locality this year. My bees are in fine condition, carrying in some honey and lots of pollen Jan. 10. I counted 22 that came in at one hive in five minutes heavily loaded with pollen. Roses are blooming nicely, and everything is like June in the East.

The past year was a very hard one on bee-keepers, which are very numerous here, some of them letting their bees starve by the hundred colonies. I saved all of mine by feeding a little in August and September, and then got some honey from them in November and December. B. S. TAYLOR.

Perris, Calif., Jan. 14.

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Contributed Articles.

On Important Apiarian Subjects.

Sainfoin and Sacaline for Honey and Forage.

BY CHAS. DADANT.

Since my first article on extracted honey was published, I have received so many letters of enquiry concerning sainfoin, and where the seed could be obtained, that I will write what I know about it.

Sanfoin needs a porous soil; it grows well in stony or gravelly land, but cannot thrive in a compact clay soil, for its roots want to penetrate deeply into the ground. It seems that it has been tried in New Mexico, for I have received a letter from Mr. Geo. H. Eversole, who lives in La Plata, in the Northern part of New Mexico, from which I will quote the following passages:

"About three years ago, seeing an account of sainfoin in the agricultural papers, and it being a leguminous plant and highly recommended for forage, I was anxious to know something about it. In making enquiries concerning it, I found

The Sainfoin, or Esparcette, of France.

out there was a small patch of it about 16 miles from here, and that it bloomed the first of May, and, to use my informant's expression, the bees 'just roared on it all day.'

"I sent to a seed house for four pounds of seed, and waited patiently for it to come up, but nary a plant grew. In the spring of 1893, a German friend gave me some seed, with the remark: 'Shorsh, you mussn't don't got der blues about dot sainfoin. Here vos some more seed dot vos more petter as good like dot you sowed last year.' Knowing a German had more patience than I had, I sowed the seed on about a rod of ground; it came up nicely—it did not grow up very tall, nor did it bloom the first season, but laid flat on the ground. But

Sacaline—A Russian Plant.

last summer it acted altogether different; it grew up tall, rather in bunches, and was looking very promising. The first of May it was coming into bloom, but the prairie-dogs made a raid upon it, and before I could exterminate them they got away with one-half of it. There was alfalfa growing close to the sainfoin, but the prairie-dogs paid no attention to the alfalfa. Then, to make matters worse, my mule got into it, and by the time he got his fill there was but very little left above ground; but what little was left, my bees did a land-office business upon it. The season was very dry, and the sainfoin had no moisture from spring till Fall, yet it stayed green till Christmas.

GEO. H. EVERSOLE."

In the part of France where I was born, sainfoin was sowed, like red clover, at the end of winter, and generally with oats or barley; for the rotation of crops there is usually first wheat, then oats, or barley, with clover or sainfoin. These leguminous forages are allowed to remain two seasons, and in the second summer the second growth is turned under in September by the plow before the sowing of wheat. I have rarely seen sainfoin kept longer than two years, and I noticed that, when it is kept several years, the crop is far poorer than at first. When the farmers want a leguminous forage to last

several years, they sow lucerne, called here by its Spanish name, alfalfa. It is customary to sow this lucerne in old vineyards that have been dug out on account of their age. The lucerne is kept for 6 or 7 years on the same land, and restores to the earth its fertility, by the action of its deeply penetrating roots.

There are two varieties of sainfoin in France—the Burgundy and the two-crop sainfoin. The latter needs better soil, and is not as hardy as the former. I advise those who desire to try this honey-plant to get a small amount, from different seedsmen, and try it first in a pot, or a hotbed. There is but little demand for this seed so far, and the seed that will be furnished to them may be old, and it is well to try it before investing largely in it.

There is another forage plant which is now advertised in nearly all the seed circulars. It is the Sacaline (*Polygonum Sachalinense*) a sort of knot-weed. It resembles the knotweeds or persicarias blooming in the United States, which are closely allied to the smartweed and to buckwheat. It is quite probable that the sacaline would be a good bee-plant, and as it originated in the Island of Sakhalin, in the sea of Okhotsk, between the 45th and 54th degrees of north latitude, it is probable that it would withstand our climate, and might prove a good acquisition for our farm animals and for our bees.

Hamilton, Ill.

Moving Bees—An Open Confession.

BY EDWIN BEVINS.

I am going to tell the readers of the American Bee Journal about the worst "fool caper" that I have been guilty of in the course of my bee-keeping life; not because I feel at all proud of the performance, but in the hope that some other bee-keeper may be deterred from trying to do the same, or a similar thing.

Being desirous, one spring, of getting more increase of colonies than I was likely to get at home, I sent two hives to a neighbor with the understanding that he was to hive me two early swarms. The season proved to be a pretty good one for honey. The swarms were hived tolerably early, and when the white clover bloom was abundant. The frames had been provided with inch wide starters of foundation, and the swarms hived on them were big ones.

Word came about the second day after the swarms were hived, and I thought I would venture to bring them home; so at night I sent a man with a spring wagon to fetch them. On arrival, the hives were placed on stands previously provided, and left until morning.

In the morning, after bees began to fly freely, I went out to see my new possessions, but there was an ominous stillness about the hives. A hasty examination showed that the bees had stored honey enough, which, added to their own weight, had parted the starters from the frames, and bees, honey and starters were all mixed up together on the bottom-board. To say that I was vexed, chagrined, mortified, is to put it lightly. My instructors—Langstroth and the Dadants—had told me better, but, like other transgressors, I thought I would try it "just once." Once was sufficient. That day I dumped two large, young swarms of bees into the most convenient gully on the farm, and washed up two bottom-boards, and did these things without trying to attract anybody's attention to what I was doing.

And now, my bee-keeping friends, if you have any apicultural sins on your souls, this winter is a good time to unload them. Let us hear from all the brethren. Leon, Iowa.

First Pollen—Spring Feeding—Bee-Paralysis.

BY "NOVICE."

Yesterday bees brought in the first pollen of the season. The cold weather has been more steady and less broken by warm days this year than usual, and in consequence we expect that when warm weather does come that our nectar-bearing flowers will be so delayed in bloomiug, that they will not be cut off by the frosts as they were last year. We confidently look for a good honey-flow this year.

Some half dozen of my colonies were discovered the other day to be nearly without stores. The first thought was to take some combs from those colonies that had a surplus; but the idea recurred that it would be a disadvantage at this season to unseal the covers that the bees had so industriously glued down last fall, and thus permit the escape of the warm air from within the hive at the most critical season of the year, when the bees are beginning to rear brood, and need all the warmth that they can get. So acting, I suppose, on a suggestion that I once saw somewhere, but can't remember where, I made a lot of rather thick syrup, and taking some extracting-combs that were in reserve, I filled these combs with the syrup, and inserted them in the hives where most needed.

These combs can be filled quite rapidly and satisfactorily by pouring the syrup from the spout of an old coffee-pot held one or two feet above the comb, and using syrup when about milk warm. The combs can be held slanting during the operation, so that the syrup will flow down, filling the cells as it runs. The work was done over a large tin pan, which caught the syrup that overflowed, and ran off the combs. In this way I filled some combs as evenly and as nicely as the bees could have done. And there is this supposed advantage, that being uncapped, the syrup will have the effect to stimulate brood-rearing.

The weather has been so cool lately that bees would not come to the Simplicity feeder at the entrance at night, and the above plan is, it is thought, a better one, though involving more labor, perhaps. The cloths (made of duck) which were heavily covered with propolis underneath, were then replaced exactly as they were before, and a hot iron passed over them, with the result that they appeared when cool to be as firmly sealed as when first disturbed. I have used the enamel cloth and the duck, and find that the bees in hives covered with duck do much better than under the enamel. The reason is supposed to be that the bees will, in the course of the summer, daub every part of the duck that they can reach between the top-bars with propolis, making it air-tight, whereas it is impossible for them to perfectly seal down the enamel cloth to the edges of the hive. They can do this with the duck.

Judging from the persisteucy with which bees seal up every crack and cranny about the sides and top of the hive, it is reasonable to conclude that their purpose is to prevent any circulation of air in an upward direction, and it seems to me desirable to use some material for covering over the frames that they can seal down. They cannot do this very effectually with enameled cloth. Those colonies that are covered with duck, or very heavy domestic, have uniformly done better, in my experience, than those covered with the enameled cloth.

I have read with great interest the article (see page 34) of Mr. Adrian Getaz on the subject of bee-paralysis. Every close observer who has watched the ravages of this disease will fully concur with his views. That the malady is infectious, due to a specific germ; that it destroys many colonies outright, and decimates many more, so that they can gather no surplus, will be admitted by every Southern bee-keeper who has seen it. Ought not the American Bee Journal unite with Gleanings in insisting that queen-breeders shall destroy every colony affected with bee-paralysis in their yards? Quite a number of the most prominent breeders have pledged themselves in Gleanings to do this, and I submit that the "Old Reliable" should encourage this movement, and thereby aid in protectiug the inexperienced from importing the disease into his apiary unwittingly. If the spread of the disease is not checked, I think that in a few years it will be firmly established all over the South, where apiarists buy queens. The matter ought to be so thoroughly ventilated in the bee-papers that the public will cease to buy queens of the dealer who will stand out and refuse to take this precaution against scattering disease and death broadcast over the country.

Gleanings publishes a list of the dealers who agree to destroy every colony affected with the bee-paralysis. Will not the influence of the American Bee Journal be lent to so important a reform? Public opinion will thus effectually quarantine against the further dissemination of this scourge of the apiarist. Your readers will appreciate an answer.

I congratulate you on the improvement in the American Bee Journal, both in its make-up and contents.

Columbia, Miss., Jan. 26.

[Certainly, Mr. Novice, I am ready to co-operate with any one in any plan that will tend to reduce the danger of spreading the new scourge of bee-paralysis. As yet, however, there seems to be not much agreement among the experienced bee keepers as to the true cause of the disease, hence no one seems to know just what is best to recommend in regard to a cure or as to preventing its spread. But, under the circumstances, I can see no great harm (and there *may* be much good) in advising all who discover the first appearance of this disease in their bee-yards, to forthwith destroy such affected colonies. I shall be glad to publish a list of the names of those queen-breeders, or dealers in bees, who will agree to follow the above advice, if they will let me know it.—EDITOR.]

Encouraging to California Bee-Keepers.

BY DR. E. GALLUP.

It is said that Southern California lost one-half their bees the past season. Now if the bee-keepers have preserved their combs, it is not such a great loss as it might be in some other localities, for, with ready-made combs it is a very simple matter to increase up to the original number of colonies, and have all in tip-top order for the honey harvest when it commences.

We are now having abundance of warm rain, and a rapid growth of vegetation. Bees here gather sufficient to make them breed very rapidly during February, March, and April, but do not store any surplus until into May. If I had the ready-made combs, and 150 colonies of bees left out of 300, it would be just fun in this climate to increase back to the 300. Of course there is work about it, but, understand, it is absolutely necessary to exercise in order to keep healthy. So you can readily see that there is a bright side to this question.

How many of our Eastern bee-keepers lose heavily in wintering, while California bee-keepers have nothing of that kind to contend with! As it now looks, we have every reason to expect a bountiful honey harvest the coming season.

PERPETUAL RANGES OF BEE-FORAGE.

I was a pioneer in Wisconsin, also in Iowa. In both States while the country was new bees did remarkably well, but as soon as the country became settled up, and all the land put into wheat, corn and grazing, the bee-pasturage was almost an entire failure, except in favored localities. But in this State, a good bee-range is perpetual, as they get their stores from the mountains, where the plow and stock cannot, and never will, interfere. Mountain fires frequently kill the white sage, but the root is left, and it springs up and makes, if possible, a more luxuriant growth, but does not bloom until the second season. It grows on the mountain sides, among the rocks, where it is inaccessible to stock of all kinds.

California produces worlds of wild flowers besides the sages—acres and acres of wild mustard; but one does not want to select a range where tar-weed abounds, as the honey is worthless except for feeding. There are large quantities in Santa Barbara county, but none to speak of farther south.

The bee-ranges are not all occupied yet, but it takes a great sight of hard labor to build roads and keep them in repair, in many places. Many of our bee-keepers commenced a few years ago without capital and without health, but now they enjoy good health and are above want.

Santa Ana, Calif., Jan. 21.

Proper Size of Hives—Comb Foundation.

BY DR. J. P. H. BROWN.

Apiculture is like some other professions in the way of progress, which seem to proceed, as it were, by a sort of ebb and flow. At one time it is 10-frame hives, then "new idea" hives of a single story of 20, 30 or 40 frames; these to relegate to the rear to give place to hives of 8 frames, and now these latter will most likely pass with the ebb for the flood tide to bring forward the 10-frame hive again.

When I discarded the old box-hive in 1870, I took hold of the 10-frame Langstroth hive. This gave me good returns, but I wanted to do better, so when Gen. Adair brought out his small pamphlet on his "New Idea Hive" I applied the "idea" to the Langstroth frame. Adair's frame was close-fitting all around, something like a section. I made a dozen of these hives holding from 20 to 40 frames. These hives I worked exclusively for extracted honey, but when the season was over and the results summed up, I found I got no better returns from them than I did from my 10-frame hives.

For several years past I have been experimenting with the 8-frame hive, and these experiments have taught me that there is a limit to hive-space (modified somewhat by locality,) which must be observed in order to obtain the more favorable results. In my locality the honey-flow proper commences about the first of April and lasts till the middle of June, after which there is a dearth of nectar till the first of September, when the fall flowers appear. The bees in the 8-frame hives would put the surplus in the sections, in the second story, and not leave enough in the brood-chamber to keep up the working force of the colony for the fall pasture. The result was, a deficiency of stores, and a necessity to feed to enable them to pull through the winter. When spring came they were weak, and by the time they built up, the best of the honey season was over, but they did not so consider it, and would proceed to cast off an abundance of unseasonable swarms.

Summing up my experience on the hive question, I am satisfied that, for most locations, a hive of nine or ten frames is as small as can be profitably used for either comb or extracted honey.

By the way, I use a two-story hive. The second story is devoted to either comb or extracted honey; and for my manipulation of hives, I want a frame with a closed-end top-bar so as to be self-spacing. For this reason I have long since discarded the old, straight ⅞-inch top-bar.

THOSE COMB FOUNDATION EXPERIMENTS.

On looking over the report of Mr. R. L. Laylor, the intelligent apiarist of the Michigan experiment station, as published in the Bee-Keepers' Review for November, 1894, I find from his experiments he has arrived at the conclusion that the septum of the samples of foundation be used in making his tests was much thinner than former makes of the same manufacturers, and from this he argues improvement in the processes of manufacture. This may be so, and it may not. My observations have convinced me that bees will, when the honey-flow is light, draw out the foundation thinner—thinner septa and thinner walls—than when the honey comes in rapidly. In this matter they seem to have an eye to that same law of economy that characterizes them in other ways. When there is a great flow of honey, they work with a rush, and do not seem to take time to pare down the septum, hence in such seasons it is left more like it was when it came from the foundation mill. Therefore, the season may have had something to do in determining the thinness of the septa of the samples of comb at the experiment station.

Augusta, Ga.

How to Distinguish Robber Bees.

BY S. A. WILSON.

On page 783, (1894) in the proceedings of the North American convention, Question No. 11—"In what way can we distinguish robber-bees," Pres. Abbott answers by saying, "Watch them and see if they bring any honey out." Now I have handled bees more or less for over 20 years, and if I should put on two pairs of glasses I don't believe I could tell a loaded bee from an empty one, when coming out of a hive. For this reason, I think the answer is very indefinite. And this is a very important question to a novice.

One of my neighbors lost one-half of his apiary last spring, by being robbed by the other half. About the first of April I asked him how his bees were doing. "Oh" he replied, "they are doing finely; I think some of them will soon swarm—they are working awfully strong."

I said: "Are you sure they are not robbing?" He thought not; but not long afterward he told me that he had lost one-half of his colonies by robbers.

I don't know that my experience with bees has been as extensive as Pres. Abbott's or Dr. Miller's, but if I were asked the same question, I would say: Watch how they alight, or enter the hive; if a bee drops down and walks right in, you may conclude she belongs there; but if she flies back and forth along or in front of the entrance for some time, without alighting, comparatively, to decide whether or not it is safe to alight, or to see where the guard line is the weakest, you may conclude she is a robber.

But a still more positive way is, if the bees are more numerous coming out than going into a certain hive, and especially more coming out late in the evening, you can brand them as robbers. They will work possibly half an hour later in the evening than other colonies. If your mind is yet not settled, and you wish to know where the robbers come from, as the bees come out of the hive (that you suspect is being robbed) dust them well with flour, then go in front of the other hives and watch for floured bees. When you find bees covered with flour going into three or four other hives, you may know robbing is going on, and something must be done to stop it. Don't wait until you see a bee coming out loaded with honey—you may not see her until the last honey-cell is empty, and your colony dead.

Adin, Calif.

Essays and Questions at Conventions.

BY F. H. RICHARDSON.

I saw awhile ago that in Gleanings ex-Pres. Abbott sets up as a defense of the convention essay reading, that it is essential to have these essays in order to give the newspapers something to publish. That is good as far as it goes, but I believe that two or three good essays would answer that purpose, and if more are wanted, they should be asked for with the under-

standing that are for that purpose, and *not* to be read in convention.

I am aware that what I have written, and my defense of the essays at the St. Joseph convention appears contradictory, but such is not really the case. I defended the essays, and demanded their reading at St. Joseph, because those men had been asked to write them, and had complied, with the understanding that they would be read, and it would then be an injustice to them, not to say insult, to not have their essays read; but while I defended them on this ground, I yet believe the *asking* for so many essays was a mistake.

Mr. Abbott says: "It is all very well to take up some of the time of the convention by such questions as, 'Which is the best smoker?' 'Which is the best queen—one with her body all yellow, or one with a tip of black at the end of her tail?'" etc. Well, Mr. Abbott, it cost me (as my bnoks show) exactly $11.40 to find out by experimental buying which smoker is best; and as for queens, I have spent many dollars, much time and labor, and I am not yet decided, so these questions, especially the latter, are to "us, who don't know it all yet," rather interesting, and somewhat practical.

Again, Mr. Abbott says, "Or else become an automatic question-box to satisfy the latent egotism of those who have an unconquerable desire to ask questions in order that they may have a chance to answer them, flattering themselves all the time that they can answer them a little better than any one else. All questions are not asked for information."

Let us see about this. I, at St. Joseph, put in the question-box the following question, viz.: "What can be done to prevent the bees sticking frames and hive-sections fast with propolis?" Now, I had my idea about this, and *thought* I knew how it could be done. I wished this question to come up in convention, in order that I (just as Mr. A. says) might answer it. Why? Was it because I was egotistical? No! Because I wanted to bring my theory before the supply manufacturers there present, and see what they thought of it, and to see what others thought of it, and to talk it over and see if it was practical, or if any one could suggest anything better. I claim that though I desired to answer that question myself, yet it was asked for, and I was searching after, information. Asking and answering such questions through the journals is unsatisfactory, because it is usually either answered by one man, or by a dozen without discussion, and in the latter case one will say "Yes," the other "No," and each being assured to be an expert, what have I learned? La Clede, Mo.

Keeping Fertile Queens in Nuclei.

BY H. DUPRET.

I am experimenting, this winter, as to how long I can preserve fertile queens in small nuclei. Here is a short story:

On Sept. 23, 1894, I got a swarm—fully 2 or 3 pounds—which issued from a colony which was replacing its old queen. On previous days I had found as many as four young queens (on different days) killed and thrown at the hive's entrance. On Sept. 23 I found near the hive, on the ground, a big ball of bees, and upon examining I saw the old queen (Italian blood from a Texas queen-breeder), and a piece of newly-made comb as large as my hand, containing nearly as many eggs as there were started cells. I suppose the old queen, unwilling either to die in the hive, or to live peaceably with her daughter, had chosen to start a new home. I thought immediately that I should try to preserve this swarm, in my observatory hive (accommodating only one frame). So I did; but all the bees could not get into the observatory hive, so I caught part of them, and gave them an old black queen that I was at the time preserving in a very small nucleus.

The bees in the observatory hive I fed with maple syrup (a big mistake, as I see now). The queen went on laying, and the colony seemed to prosper as long as the bees could have their regular flights. But when I confined them to a dark room, diarrhea set in, and they were soon reduced to perhaps one-fifth of their previous number. So I concluded that the experimenting with maple sugar should stop, and yesterday (Dec. 16) I confined the queen and the remainder of the bees (some 700 or 800) in a small box, accommodating four one-pound sections of mostly capped honey. So much for the story of the old Italian queen. I may conclude it in a few months.

Now to the black queen, with her Italian retinue. They were placed also in a very small box containing one one-pound section (¾ pound of honey). Will you believe it? They are still in very good condition—may be a few bees died (there were about 250, and there remains about 150), and not the least sign of diarrhea. At the present date (Dec. 17) their honey is not quite all consumed, so I had to place them in a somewhat larger box, adding nearly one pound of capped honey. Will they get through the winter? The future will tell.

One more word, and an important one, too. Upon examining the frame of my observatory hive, now empty, I found, to my great surprise, by the side of the little remaining syrup (which was never capped), nearly 2,000 eggs lying flat on the bottom of the cells. I suppose the eggs are three days old, but not a single larva. I never thought the queen would resume so early her laying duty. The exceptionally mild weather of last week may account for this. But then, what think you of the large colonies? If laying is going on, a big quantity of food will be consumed, and some may starve before the spring opens. That is the reason why I am thinking of giving more food to weak colonies.

PUMICE-STONE FOR REMOVING PROPOLIS.

Here is another kink: Best hand cleaner for propolis, and handiest, too, is the pumice-stone (apply to your druggist) used with simply water, for scraping your hands. At least I find it so. Montreal, Canada.

A Plan for Uniting Nuclei.

BY PHILO S. DILWORTH.

Various plans have been given for uniting nuclei. Much of that kind of work is to be done after the honey season, when there is not much if any honey coming in. Where the queens are not valuable, and the apiarist is not particular, there are various hit or miss plans that are fairly successful. Sometimes we wish to reduce the risk to the minimum, and at the same time do not want to cage the queen.

Once last summer I tried the following plan, that is, so far as I know, original with myself:

I wished to unite No. 1 nucleus with No. 9, that was also a nucleus. No. 1 had the good queen that I wished to keep—No. 9 had a poor queen I wished to kill. I killed the queen of No. 9, took away all brood and eggs, and covered her bees down on two empty combs, with a little honey. I do not understand that the presence or absence of honey in the dead combs figured in the success of this plan. I left No. 9 queenless, broodless and eggless 24 hours until the following evening. At the expiration of the 24 hours, I went to No. 1 and covered down their queen, bees and combs of brood to one side of the hive, using a close-fitting division-board for that purpose. I then reached into the large empty part of the hive behind the division-board, and stuffed the entrance with rags. This left no communication with the empty part of the hive except through the space at the upper corner of the division-board at the tin rabbets.

Then I went to No. 9, smoked the bees onto their dead combs, and carried them to No. 1, and hung them in the empty part farthest away from the other nucleus. Close to them I hung a loose division-board or follower, allowing the strange bees free access to the vacant center of the hive. But they could not get outside the hive except by passing through the apertures at the upper corners of the close division-board, and down through the good nucleus. The entrance to the good nucleus was left open as usual, except to guard against robbers, and retain the warmth.

In a couple of days I found the dead combs deserted, the good nucleus about twice as strong as before, and the queen quietly laying as usual. The queen did not appear to have been disturbed by the strange bees, and none went home to the old stand. Ingram, Pa.

The Sunny Southland.

CONDUCTED BY

MRS. JENNIE ATCHLEY, BEEVILLE, TEX.

To Southern Bee-Keepers.

We have had a very cold winter, and likely a late, backward spring will follow, and some of your bees may need feeding before honey comes. It won't pay to let them suffer. We are at least one month behind on account of the cold weather, and I suppose this will apply to most Southern States, and our bees will likely have a hard month before honey comes. We must look a "leetle oud," and supply their wants and needs,

and kill two birds with one stone—while we are looking after the wants of the bees, we will be at the same time looking after our own needs—pocket-book. Do you understand?

JENNIE ATCHLEY.

Fair Warning.

Friends, have you been reading this winter? If so, have you noticed that California has lost more than half her bees, Florida is frozen out, no honey crop anticipated, and the coldest weather known for years in the North, which means good-bye to all the bees carelessly put up for winter? Now, this is one of the years for those that have bees left to look out for No. 1, and have all your supplies ready, and push your bees when the right time comes, as more than likely honey will be pretty high next fall. So look out!

JENNIE ATCHLEY.

Bees Dying—Carniolans, Etc.

MRS. ATCHLEY:—1. What is the matter with my bees? They come out when the weather is at 20° above zero, and die, of course.

2. What are the Carniolan bees? What is meant by "steel gray," black or blue? Do you consider them better than Italians?

3. What bees do you think are best for honey—Cyprians and Syrians excepted?

ISAAC HAYS.

North Yakima, Wash., Jan. 25.

Friend Hays, I think your bees must have a touch of the diarrhea, and are so uneasy that they cannot stay inside. I think that trouble will all pass off as soon as warm weather comes, or when they get a chance to fly.

2. I do not know what gave the Carniolan bees the steel-gray name, but I suppose it is because the bees are about the color of steel, where a piece of steel is broken in two. You know it will show a kind of bright silver-gray appearance, which is about the color of the genuine Carniolan bees, and they are neither black nor blue, but a rusty gray, and I think simply "gray Carniolans" would be more proper. I am not able to say whether they are better than Italians. I have tried them three years, and like them, but I could not yet say whether they are better than Italians. But you might try them and report.

3. I would not turn around for difference for honey-gathering, between the 5-banded Italians, 3-banded, or Carniolans. I think that a good strain of either race is safe for a bee-keeper. It is not the bees every time at fault, but the keeper.

JENNIE ATCHLEY.

Report of the Southwest Texas Bee-Convention.

BY F. A. LOCKHART, SEC.

(Continued from page 106.)

NUMBER OF COLONIES FOR A BEGINNER.

As nearly all present were beginners, or wanting to begin, Question No. 1 was, "How many colonies should a beginner start with?" It was answered as follows:

Mr. Graham—5 colonies.

Mr. Lockhart—5 colonies.

Mr. Bankston—I began with 50 colonies, and made it a success from the start, and I think if a person is going to make a bee-keeper he can manage 50 colonies the first year.

Mr. Victor—One to 10 colonies.

E. J. Atchley—About 3 colonies will be enough for the average beginner.

Jennie Atchley—5 to 10 colonies. I think that if a person has the right turn of mind for a beekeeper, he or she will not be content to start with 2 or 3 colonies, but will necessarily need more to hold them down.

Willie Atchley—I think about 20 colonies, if the beginner is in reach of a good bee-keeper where he can run for advice when he gets tangled. Otherwise, about one colony will be enough.

Dr. Marshall—About 10 colonies, if he can get help from a neighbor, as Willie says. If not, better have less.

Mr. Lord—1 to 5 colonies.

C. Theilmann—1 colony, and let him have a side-issue whereby he may make a living till his bees are increased with his knowledge.

Mr. Theilmann, of Theilmanton, Minn., was then called on to give his report, which is as follows: 200 colonies, spring count, and 45 pounds per colony, all comb honey except 1100 pounds of extracted. His whole crop was about 9,000 pounds. He had 75 pounds of wax.

Fred Cooke also came in and reported. He lives in the vicinity of Austin, Tex. He had 50 colonies, averaging 150 pounds of comb and extracted honey per colony.

Question No. 2.—What books or papers should a beginner read? was asked. It was thought best by all the beekeepers present that a beginner should have one of the leading bee-books, and then he could add to his literature as he chose.

THE REQUISITES OF A BEE-KEEPER.

Question No. 3.—What are the requisites one should possess to make a beekeeper?

Mrs. Atchley—I think these: Push, pluck, sticktoitiveness, and a love for the business.

Mr. Graham—I think natural adaptation has a heap to do with it. We are all more or less adapted for something, and I believe when a bee-hive is seen by one that is adapted for a bee-keeper, he will halt and make some inquiry.

Mr. Victor—I think one should be a lover of nature. Those that look after bird's-nests and such things when young. Those that love to stay around where bees are, and when a bee stings him, grin and hang on. He *must* have nerve, and stay with 'em. I think such an one will succeed.

Dr. Marshall—Common sense and courage.

Mr. Lockhart—I do not like to discourage any one, but I am sure just every one will not make a bee-keeper. One who loves the bees and has grit enough to stay with it, through good and bad alike.

E. J. Atchley—I think the requisite to a successful bee-keeper is one that goes into it for love as well as money, and I think that when a person goes into bee-keeping for the money alone that there is in it, he will fail, very often. You must go in for the glory as well as the money.

Mr. Theilmann—I think one, or the best, requisite is to look at both sides, the dark and the bright. I came to your country to see the dark side, and I think I struck it at just the right time to see it.

HOW TO START IN BEE-KEEPING.

Question No. 4.—Would you advise beginners to buy bees in box-hives and transfer, or would it be best for them to buy bees in the latest improved hives?

Dr. Marshall—Improved hives.

Mr. Lord—Get bees in box-hives and transfer, and when the experience has been bought, get frame hives.

Mr. Victor—Get some improved hives is best, and study books and bees, and when you have learned to handle bees, then you can get bees in box-hives and transfer, etc.

Mr. Graham—Improved hives.

Mrs. Atchley—I used to advise beginners to get bees in box-hives first, but I have seen some give up bee-keeping in disgust by just making a mock of transferring before any knowledge was known of bees, and now I say, get frame hives.

Mr. Lockhart—I would advise improved hives.

A. D. Hanna—My experience is this: Better start at the bottom, and work up, and meet all the obstacles. Then the beginner is in better shape to overcome troubles on the way.

Mr. Theilmann—I agree with Mr. Hanna. I killed 70 colonies, and I find that people lose more than they gain by starting with the improved hives. It is best to read and practice at the same time.

E. J. Atchley—I would advise beginners to start where we quit. I would let them start where we have stopped, and not have to go through with all the bitter experience. There is no use in beginners being so long learning to handle bees nowadays.

QUEENLESS BEES STEALING EGGS.

Question No. 5.—Will hopelessly queenless bees go into other hives and steal eggs with which to rear queens, and go into the queen-rearing business?

Dr. Marshall—No. I would advise people to be content until God makes a race of bees possessed with reason.

Mr. Bankston—Yes, I think that Henry Alley will soon be advertising such queens for sale, that will produce bees that will do that.

Mr. Victor—I do not think that I could ever expect a dollar out of such bees, and do not want them.

Willie Atchley—I do not think that bees move eggs from anywhere for the purpose of rearing queens, or for any other purpose. I would just as soon expect my old turkey hen to go to another turkey's nest and steal eggs to hatch a brood, as to expect bees to steal or move eggs.

Mr. Lockhart—I think any one is crazy that thinks bees do the like.

Mr. Graham—Bees are too honest to steal eggs. They

may steal honey, but if my bees get to stealing eggs from other bees, I'll sell them, for I know they would "kick," and not store any honey for me.

Jennie Atchley—No, there are no such bees, and never will be, as that would be a plain case of the keenest of reason, and any of us know better.

E. J. Atchley—No, bees do not steal eggs, in my opinion, as that would place them alongside of human beings possessed with reason, and we know better.

PREVENTING PROPOLIS ON THE TOP-BARS.

Question No. 6.—What device can be used to keep bees from sticking propolis on the top-bars of the brood-frames?

Mr. Graham—I don't know.

Mr. Victor—I don't know, either.

Dr. Marshall—I find that any poison, or anything that will keep the bees from using propolis, will be an injury to the bees.

At this moment Mr. O. H. Stevens, of South Dakota, came in and gave his report as follows: Spring count, 28 colonies, increased 28, and took 600 pounds of comb honey. He fed 500 pounds of sugar to get his bees in good condition to gather the flow.

Then the discussion of questions went on as follows:

Mrs. Atchley—I don't know what can be used to keep propolis off the frames.

Mr. Atchley—I don't know.

Willie Atchley—Some think that to allow a good-sized bee-space will cause bees to use less propolis, but I find that bees will build comb in the space if too large, which is worse than propolis.

FOUR ANNUAL NORTH AMERICAN CONVENTIONS.

Question No. 7.—Would it not be better for apiculture to have four North American conventions each year, to be held at different points, only so all could go?

Dr. Marshall—Traveling expenses are in the way, and I do not think it would be a success.

Mr. Lockhart—It might be a good idea for each local convention to send an invitation to the North American Bee-Keepers' Association to visit the South, and see if it could not be induced to come nearer. Then we would get to see and hear foreign bee-keepers.

Mr. Flornoy—I do not think that is what we need. I think we need a south Texas convention, as what those people living in the North have to talk about mostly is how to winter bees, bee-cellars, etc., and that would not do us any good, and still it is one of the all-important questions in the North. I will ask that Mr. and Mrs. Atchley agitate this, and see if we cannot get a south Texas convention.

Dr. Marshall—We have a Texas State Bee-Keepers' Association, and it meets annually, and our meetings are not attended as they ought to be. I think we should use some plans that will induce bee-keepers to attend, and when we meet and talk over our experiences, etc., we go home enthused, stimulated and ready to take right hold and push the bees, and I tell you we need bee-keepers to attend our meetings, and then we have more chance to elevate the pursuit.

CURE FOR BEE-PARALYSIS.

Question No. 8.—Have you discovered the cause of bee-paralysis, or a cure for it?

Mr. Graham—I have no experience.

Mr. Lord—I do not know of the disease.

Dr. Marshall—I do not think there is much of this disease in Texas, as I do not run across any. I do not know of a cure, nor the cause.

Willie Atchley—*I* do not know any remedy, nor the cause.

C. Theilmann—I have had it in my bee-yard, and have experimented with it. I tried salt and water, exchanged queens, and neither did any good. Also sulphur, and the disease went away, but I don't think the doctoring did any good. It hurts the bees to use too much sulphur.

Mr. Flornoy—This is a new thing to me. How does it affect the bees?

Mr. Theilmann—At first we see some bees on the alighting-boards that seem to be shaking, or act as if they had a chill; and some bloat up and die, and you will see from a spoonful to a pint of dead bees in front of the hives of the diseased colonies. With prolific queens they seem to keep up until good, warm weather, and honey comes in, then they seem to get all right.

Mr. Bankston—I have had some experience, and tried sulphur, and I killed my bees outright. I do not know whether the sulphur or disease killed them.

(Continued next week.)

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Comb Honey or Extracted?—Snow at Hive-Entrances.

1. At the present prices, which is the most profitable, comb honey or extracted?

2. Is it needful to keep the entrances of hives clear of snow? It sometimes disturbs the bees to clear the snow away.

Sherwood, N. Y. S. B. H.

ANSWERS.—1. That depends altogether upon circumstances. For some, comb honey is more profitable; for others, extracted.

2. A light snow covering the entrances will do no hurt, and sometimes will do good by keeping out the cold wind. If the snow melts and clogs the entrance, it's best to clear it away, for if it freezes in that shape, it may prevent the proper entrance of air.

Probably Troubled with Mice.

I still have 10 colonies of bees on the summer stands, with corn fodder around them. I have 2 colonies that there is something the matter with. All the bees that fall down to the bottom of the hive have their heads cut off. What is the matter with them? The rest are all right.

We are having cold weather now—it is snowing to-day.

Perrysburg, Ohio, Jan. 23. W. M. D.

ANSWER.—Likely mice are troubling. Get some coarse wire-cloth, with three meshes to the inch, and put at the entrance. This will keep out the mice, but not prevent the passage of the bees. If in doing this you shut the mice in the hive, of course that will not be a perfect cure, but if mice are plenty it will be a good thing to thus close the entrance, even if a mouse should be fastened in. Better have one mouse fastened in to do its worst—and it probably will do no worse for being fastened in—than to have a dozen with the full run of the hive.

Bees Flying in Winter—Feeding—Hoffman Frames.

I began with one colony of bees in the spring of 1893, and now have 4 in seemingly good condition. They are packed in single-walled hives on the summer stands. When the ground is all covered with snow, and the sun comes out warm and bright, they come out, get chilled, I suppose, fall on the snow, and perish. A few days ago, I could see dead bees for several yards from the hives. I have put wire screens in front to prevent them from coming out, but I find several dead on the screens—especially those facing south. Now, I should like to know if they ought to have their way, and be permitted to fly out whenever they "think" it warm enough. (I am from Louisiana, and have lived in Indiana barely three years.)

1. Ought I to put up those screens? Last winter was so mild that I had no trouble of this kind.

2. When should I begin feeding in order to put the queen to work increasing bees for honey-gathering, and how long should I continue to feed?

3. A design increasing my stock—gradually—to 50 colonies. I want to adopt the most suitable hive with necessary appliances for comb and for extracted honey—a hive fit for out-door wintering. I want the best brood-frames. I have the Hoffman frame, but think there may be one less objectionable. I want your advice about hives, frames, etc.

Groves, Ind., Feb. 4. W. J. D.

ANSWER.—1. I think this is one of those cases in which you would better let the bees have their own way. If a bee in good health wants to get out when the sun shines, it isn't likely to be injured by it. Whether it's a good thing for it or not, if it finds itself penned in it will be all the more determined to get out, and it will not be satisfied with trying to get out itself, but it will stir up a lot more to want to get out. A good many bees, however, that want to get out on fine days are not possessed of rugged health, but such as have finished their lease of life, and ask nothing but to get out of the hive to die. They'll die whether they get out or not, and it is

better for the colony that they die outside. So you see it is unwise to compel the bees to remain in the hive by anything like screens through which they cannot pass.

There are times, however, when it would be better if bees would remain in the hives, provided they would do it willingly. If a light snow is on the ground and the sun shines brightly, they may come out, become dazzled by the sun, and sink in the soft snow, never to rise, as you mention. To prevent this, it is a common practice to put boards or something of the kind in front of the entrance to prevent the sun shining in. Some advise having the hives face north in winter, so the bright sun will not entice them out, while others object to this, because when a warm day comes when they should fly, then it is an advantage to have the sun shining on them.

2. I'm not sure whether I know the right answer to that question. Some will say to feed every day whenever bees will fly, while others will say don't feed at all, unless the bees are short of stores. Of the two, I believe I would rather take the advice of the latter. If the bees have all the stores they need and a little more so that there seems no need to economize, they will probably rear brood nearly as well as if a good deal of feeding was done. Still, if there should be a spell of good weather in the spring after the bees had been working on flowers, and there seemed no more flowers for them to work on, I should feel tempted to give a half-pound or so of honey or syrup to each colony about every other day, giving it to them pretty thin. As soon as they can gather from flowers, then it is well to let up on the feeding.

3. The hive and frame question is one that is hard to settle. At present there seems a tendency to go back to something larger than the 8-frame hive which has been so popular. Years ago the 10-frame hive was the popular one, and some of our best bee-keepers think that is too small, especially for extracted honey. It is possible that a two-story may find favor, having 8 frames in each story. At present I know of no frames in use better than the Hoffman, all things considered, but a good many object to the shoulders on the end-bar.

A Question About Hives and Frames.

I have been trying to keep bees for two years, and have had no success yet. My brood-frames are 9¾x10¼ (9¾ deep). Is that size too deep or too wide? I mean inside measure. The brood-chamber is 11 inches deep, 12 wide, and 18 long. Is that too large for extracted honey?

Grand Prairie, Tex. EARNEST NOVICE.

ANSWER.—The sizes of your hive and frames are quite unusual, and yet I doubt whether it would make such a great deal of difference if you had those most commonly in use. So far as size is concerned, most producers of extracted honey would prefer something larger. If you confine your bees to the one story throughout the season, they are certainly in too limited quarters. If you will tell a little about your management, and the bees' management, possibly some hints may be given that will be useful to you. But first and foremost, have you thoroughly studied a good bee-book? If not, can't you secure the "A B C of Bee-Culture," that the publishers of this journal are offering on such remarkably favorable terms? It will be worth many times its cost to you. [See offer on page 126.—EDITOR.]

Restless Colony—Italian Bees and Five-Banded.

1. One colony of my bees has been dying since Nov. 1, 1894, from some disease unknown to me. Their abdomens become swollen or distended and they drop from the comb to the hive-bottom dead. After death some of them turn a little dark in color, and the top of the hive, when opened, smells like decaying bees. The queen in this colony lays every month in the year. On Jan. 15, I was looking through this hive, and I saw sealed brood in the two middle frames, as wide as your two hands. Last summer this queen reared as many bees as any two queens I have. What is killing my bees, and what is the remedy?

2. What strain of bees is the best honey-gatherers, and the best to winter on the summer stands?

3. At what age will a queen lay the greatest number of eggs?

4. What is your opinion of the 5-banded bees?

5. Why will bees hang out all summer, and not swarm?

Fellowsville, W. Va., Jan. 28. B. T.

ANSWER. I should suppose that this queen and her colony are peculiarly restless and active in character, keeping on the move and rearing brood when other colonies are quiet.

This being the case at a time when they cannot fly freely, their intestines become distended; in other words, they are troubled with diarrhea, and death results therefrom. No special treatment will meet the case, but you can do anything that may prevent them from being excited or disturbed. If the light shines in at the entrance, put a broad board or something of the kind in front to shade them. See that they are not closed up too warm. Cats, birds or living things may be disturbing them. As the weather becomes warm enough for them to fly freely, you may find them come out all right.

2. Taken all in all, the Italians seem to be the favorite. I don't believe they'll winter any better than the blacks, but in West Virginia I doubt if you'll have any trouble about their wintering, and they are generally conceded to be better gatherers.

3. I don't know. Perhaps in her second year.

4. If half a dozen different men set to work to rear a strain of five-banded bees, neither of them paying attention to anything but color, I should expect that five out of the six strains would not be as good as the three-banded bees, and very likely the sixth would be poor. But if a careful and conscientious breeder should breed up a strain, weeding out bad qualities and retaining good ones, I see no reason why he might not at the same time develop the five bands. So I should say that there are probably bad and also good 5-banded bees. They are said not to winter quite so well as others.

5. Perhaps they're not gathering enough.

Growing Basswood from Sprouts.

I can get from 900 to 1,000 basswood sprouts by cutting them from the stumps. They average from one to four feet long. Will they grow, or will they have to have roots on? What are such sprouts worth? O. R. H.

Sennett, N. Y.

ANSWER.—I don't believe they are worth anything without roots. Of course, a florist might take a sprout without roots and start roots from it just as he does from a rose cutting, but with ordinary appliances nothing of the kind could be done. To be of any value they must start from the stump so low down that they will have roots attached.

Warming Hives Artificially.

On March 2, 1894, I tried Mr. Hutchinson's way of packing two hives with sawdust, and they did better than those packed with dry leaves. He says to leave them packed until after they swarm, and as they did not swarm at all I left them so all summer. They commenced hanging out on May 3, and were only driven in once to stay a few days, and that was on May 18—it snowed nearly all day. Each colony filled 56 one-pound sections, which had only starters.

What would be your opinion of warming the hives by artificial heat? How would it do to take any number of hives from 10 to 200, and place them in rows, with the backs turned together, and have them packed to retain the heat, and then have a steam-pipe between them, so that any degree of heat required could be turned on or shut off at will? I believe that the inside of the hive should be kept 90° to 100°.

Caledonia, Wis. W. K.

ANSWER.—I don't like to discourage anything in the line of experiment, but I very much doubt if your scheme would be successful. I have never heard of any success in that line, although it has been tried to some extent. A. I. Root was at one time quite sanguine of success with hives surrounded with horse manure in hotbed style, but the experiment was a failure. Bees have also been kept in greenhouses in winter, but not successfully. You can't get too far away from nature's beaten track without generally coming to grief. If you try anything of the kind at all, I should advise it on so small a scale that you need shed few tears over its failure.

That New Song—"Queenie Jeanette"—which is being sung everywhere, we can send you for 40 cents, postpaid, or club it with the American Bee Journal for one year—both for only $1.20. Or, send us one new subscriber for a year (with $1.00), and we will mail you a copy of the song free.

Experience is of course the best teacher, and its lessons nearly always leave on record instances of failure, of a more or less serious nature, which have to be met before final success can be ensured.—*Simmins.*

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DR. C. C. MILLER - - - "QUESTIONS AND ANSWERS."
MRS. JENNIE ATCHLEY - - - "THE SUNNY SOUTHLAND."
"GLEANER" - - - - - "AMONG THE BEE-PAPERS."
"BEE-MASTER" - - - - - - "CANADIAN BEEDOM."
DR. F. L. PEIRO - - - - - "DOCTOR'S HINTS."
REV. EMERSON T. ABBOTT - - "NOTES AND COMMENTS."

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Editorial Budget.

"**Lift Up Thy Heart** with gladness,
Forget all minor pain,
And life's strong chords shall answer back
In blissful major strain.
Strike thou the note of joyousness
And it shall come to thee,
For life is built from all the things
Which we expect to be."

Dr. C. C. Miller, of Marengo, Ill., made me a short but pleasant visit last week, when on his way to Peoria, Ill., to assist Rev. E. L. Williams, of the Presbyterian church, in evangelistic services. Dr. Miller conducts the singing, which insures success in that part of the work.

The Indiana State Convention, at Indianapolis, Jan. 9, was one of the best ever held by that association. The following were elected as officers for the ensuing year:

President, Walter S. Pouder; Secretary, Edward S. Pope, 235 Blackford St., Indianapolis; Treasurer, Mrs. Olive McCurdy; Vice-Presidents, Dr. J. M. Hicks, Richard Kittley and Geo. P. Wilson.

Secretary Pope has sent the essays to be published in the American Bee Journal, which will be done as soon as possible.

Mr. A. Eastman, an old bee-keeper living in Union, Ill., called at the Bee Journal office last Thursday. He returned from a trip to the State of Washington the middle of last month, having purchased an 80-acre farm about 10 miles from Spokane. Mr. E. will remove there at once, with his family—he expected to start last Saturday or Monday. His address will be Duncan, Spokane Co., Wash. He will raise fruit and keep bees in his new home, which he is already in love with. After keeping bees there, Mr. Eastman has kindly promised to write about it for the readers of the American Bee Journal.

Something Historical.—In his "Echo from Canada," on page 122, Rev. W. F. Clarke gives some interesting historical facts about the American Bee Journal. Read it, even if it should be a familiar story to you. Mr. Clarke sets a good example, in that he is the first to contribute to Bee-Master's department. Now let other Canadian bee-keepers who feel they have something to say that will help their bee-keeping friends, just send on their contributions for "Canadian Beedom." I am sure Bee-Master will appreciate it, and it will tend to make that department of more value to our northern neighbors. Where are those staunch men and vigorous, practical bee-writers, Bros. Pringle, McEvoy, McKnight, and others? This may be the season for hibernation among animals, but that's no reason why bee-keepers should be mum, too. Turn on the electric light of correct apicultural knowledge, and see how quickly ignorance and superstition melts before it.

Mr. S. I. Freeborn, of Richland Centre, Wis., died Feb. 5, 1895, in his 62nd year. For many years he had endured a bronchial affection and stomach trouble, which became more serious last fall, practically confining him to his home until his death. A few weeks ago he contracted, pneumonia which finally resulted fatally.

Mr. Freeborn's son-in-law, Mr. C. A. Hatch, of Ithaca, Wis., when informing me of the sad news, said: "Mr. Freeborn was one of the pioneer bee-men of Wiscousin, and one of the largest bee-keepers at the present time."

The American Bee Journal wishes to tender its sincerest sympathy to the bereaved family and friends. Next week it will present a short sketch and portrait of Mr. Freeborn.

A New Kind of Devil.—Yes, they've got him in California. Several of him, in fact. For short, they call him a "bee-devil," for he (and his brethren) have so bedeviled a whole apiary that it is beyond the hope of redemption or salvation. One of our exchanges tells about it in the following paragraph:

There is a species of beings that are known for short as bee-devils. They are not common in civilized communities, which is a consolation to apiarists. They sometimes don war-paint and whoop-up an apiary in idiotic style. Recently they made their appearance in the apiary of Mr. Lang, in the San Fernando Valley. They wished to demonstrate to the world their grade of civilization, which would disgrace a Hottentot or Rootdigger Indian. They got up steam on sour wine, and then proceeded to biz by turning over 100 colonies of bees, riddling extractor and tank with bullet-holes, and rolling them down the mountain, and then proceeded to wipe out the apiary with less decency than Bruin would have done it. Mr. Lang was away at the time. These bee-devils are known, and will yet feel a pungent sting from the strong hand of the law. Let missionaries be sent to that benighted locality.

Yes, that's right; send "missionaries" up there to teach the bee-devils, and everybody else, to let "sour wine" severely alone, and all other intoxicants. "Touch not, taste not, handle not" is good advice about such dangerous things.

Mr. and Mrs. W. J. Cullinan, of Quincy, Ill., are again bereaved, in the death of their son and only child. A letter dated Feb. 8, reads thus:

FRIEND YORK:—Again our hearts are lacerated with deepest grief. For on Feb. 2 our only remaining little son, George William, 4½ years of age, closed his eyes in death. He had been sick only about 18 days with typhoid fever. 'Twas hard to give up this brightest ray of sunshine in our home, just as he was budding into beautiful boyhood. At a point where children become most interesting, the silken cord that bound his little life to earth was snapped, and that life took on the garment of Eternity.

Two sons—and those our only ones—within a year! This is the cross we are called upon to bear; and still we pray, "Father, Thy will, not ours, be done."

It will be long before this second wound is healed. Little Georgie was a promising child, and we anticipated a bright and useful future for him; but God willed it otherwise, and we are sad.
W. J. CULLINAN.

Having passed through a somewhat similar affliction recently, Bro. Cullinan, I can sincerely sympathize with you. It was our first-born that was taken from us almost before it was given, and we know how sad it is to be thus left alone. I am sure the bee-keeping friends all unite in a feeling of deepest sympathy for you in your darkened home.

Some have almost chided me for taking so much space in the Bee Journal for such matters as these, but 'tis all right, friends. You won't think these notices are a waste of space, after the Death Angel has once visited *your* home. No, no; you must all pass through the same dark hours some day, and I'm sure you'll feel that a sympathetic word at such a time is most welcome indeed, though words be then so empty and unsatisfying.

Among the Bee-Papers

Conducted by "GLEANER."

ILLINOIS STATE BEE-KEEPERS' ASSOCIATION.

The editor of the Review wants to know why this society did not hold its 1894 meeting in Chicago, according to the understanding had when the "Northwestern was merged into the Illinois State." He hints at the advisability of a new Northwestern, if Illinois doesn't wake up. What's the matter with those *Suckers?*

THE BEE-KEEPING OF THE FUTURE.

In an essay read before the Ontario convention, Hutchinson says: "Bee-keeping in the early days was a side-issue, then it became a specialty and will remain such in favorable localities, but over a large portion of the country it will become again a side-issue; but improved hives, implements and methods will make of it a more desirable and profitable avocation than it was in days gone by."

REQUEENING AN APIARY.

Here's the plan given by E. F. Quigley in Review. Get one or two good tested queens near the close of the main honey-flow. Start queen-cells each day. When a queen-cell is about ripe, put it between the combs of a colony to be requeened, having removed the queen three days before. Or, cells may be put in supers without removing the queen, and in 80 per cent of the cases success will follow.

HIGH-PRICED PRODUCTS OF THE APIARY.

Seems good to see something again from J. A. Green (page 65.) But what makes him leave us in the dark as to how he got the bees to make queen-cells in January? I don't believe everybody could do it. Perhaps he's a little "off" as to $25 an ounce being the highest price ever paid for the products of the apiary. I don't know how much has been paid for stings or poison, but I think a good deal more than $25 an ounce has been paid for queens.

DAMPNESS IN BEE-REPOSITORIES.

There's a lot of sense in the following words of Doolittle, in Gleanings:

"Now, I wish to say to each and every one, that, so long as bees are quiet, or very quiet, no matter where they are, whether in the cellar, in a room above ground, or on the summer stand, they are wintering in the best possible condition, and should be left undisturbed, no matter if the place where they are is dripping with moisture, or so dry that you may fear the bees are suffering from want of water. Quietness is the essential quality for safe wintering, for with it always comes the least consumption of stores, and with a minimum consumption of stores comes the least possible exhausted vitality and the greatest longevity during the spring and early summer days."

SO UN-"RELIABLE" AND MISLEADING.

Is the editor of "The "Old Reliable" jealous? or what makes him try to mislead his readers about who makes the Review? On page 80 he prints the pictures of four men, headed "Men who make the Review." Those four men don't make the Review. It's W. Z. Hutchinson, and a mighty good paper he makes.

There's also an attempt to mislead on page 60, where it says "Root's iron lasts;" evidently conveying the impression that Root's iron lasts longer than other people's iron, and I don't believe it does. Let the "Old Reliable" be reliable.

[Now, look here, you young upstart of a "Gleaner," you'll get yourself into trouble if "you don't loog a leedle oud, maype alretty." If Bro. Hutchinson says that only four good men "make the Review," why, it's none of my affair, or yours either. His name is signed to his advertisement, and if you want to "scrap" with anybody, just tackle "Hutchy" himself. You have my full consent to "sail into him," "and glean 'im all oop."

Another thing, Gleaner: If you don't believe "Root's iron lasts longer than other people's iron," you don't have to. But I'm willing to defend him so far as to say that I'm sure Root's *last* iron is as good as his first, hence it "*lasts.*"—ED.]

Miss Rose Roese.

My sister, Rose Roese, was born Dec. 15, 1867. From early childhood she was a lover of the busy bee, and used to follow father fearlessly when at work among the hives.

At the age of 13, when father and mother went to camp meeting, after staying away from 8 to 10 days, sister Rose would volunteer to stay at home to see to things, and take care of the bees. And as camp meeting time (the middle of June) usually is the swarming time in this part of the country, she watched and hived carefully every swarm that issued, without any loss.

As Rose grew older she proved to be quite efficient help to father in the apiary, outside of her school hours.

She studied hard to qualify herself for teaching in the common schools, and at the age of 16 she obtained her first certificate, or permit, to teach, and the money she thus earned she spent again during her attendance at the State Normal school at River Falls, Wis. She taught school successfully until her 23rd year, when she devoted herself to the care of

Rose Roese.

suffering mankind, and for this purpose she enlisted in the 5-years' training class for medical missionary work at the sanitarium at Battle Creek, Mich. After two years' faithful service she had so won the confidence of her instructor and superintendent in charge, that she was permitted to visit patients alone. In the third year of her course (now a year ago), she came home to attend a family reunion. I being taken sick shortly after, she proved then the means of saving my life, according to my physician's own statement, for he could not have gotten here in time to do me any good.

After she saw me out of danger, she returned again to the Sanitarium, but, sad to say, only for two months, for she was compelled to come home, having contracted that dread disease —consumption. Her sufferings were far beyond description, from April to Dec. 2, 1894, when she fell asleep.

A few days before her death she requested me to read to her 1st Thessalonians, chapter 4, verse 13, to the end of the chapter, relying firmly on those comforting words, with the hope of a glorious resurrection. She called all the family to her bedside on Thanksgiving Eve, bidding each one good-by, with the request that each lead a Christian life, and meet her in Heaven.

'Tis hard to break the tender cord,
When love has bound the heart;
'Tis hard, so hard, to speak the word—
We must forever part.

Dearest sister we must lay thee
In the peaceful grave's embrace;
But thy loving memory's cherished
Till we see thy Heavenly face.

MRS. MINNIE WAGNER.

Maiden Rock, Wis., Jan. 17.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

What For.—"We cover all our bees with a solid board, made out of inch lumber, dressed on both sides, cleated at the ends to keep from warping. Over this board we put into the chamber some straw four to six inches deep."—E. France.

Now, what I would like to have some one explain is, for what reason is the straw put in? Is it put in to keep the bees warm, to absorb the moisture, or what? What element of safety does it furnish in this case, anyway? I know that many, perhaps the majority of bee-keepers, have long had an idea that bees could be kept warm by placing around and above them a few inches of straw, but can they? I, for one, do not think they can, and I will venture just here to make an assertion the truthfulness of which anyone can test. No colony of bees covered with an inch board sealed tight and left out-of-doors, with the entrance wide open, will ever die from cold in this United States, if said colony of bees has plenty of good sealed honey *above the cluster, in the combs on which the cluster forms*, provided said colony was strong and healthy when it went into winter quarters.

I have repeated, time after time, during the last ten years, "Bees do not freeze, they starve!" All of my experience during that time has only gone to strengthen my convictions of the truthfulness of the statement. For the first five years I was in Missouri I kept from 150 to 200 colonies of bees, and I was buying and selling bees all the time. The result was that I had all sorts of hives in my apiary. I began with the notion that I could put a few inches of chaff or leaves around bees and keep them warm. One of the hives in which I found colonies of bees that I bought, had room enough to pack a foot of straw or chaff all around the brood-chamber, and I put it in. Some had room on top, and I put it in there, and some had no room anywhere, and, what seemed worse, were in hives made of ⅜-inch lumber. What was the result? In almost every case the colonies in the thin hives cast the first swarms. Their frames were 12 inches deep, and they had plenty of honey in the *right place*.

I see Mr. Pond mentions in a late number of the American Bee Journal the fact that his bees winter on their summer stands, and seem to defy the cold in the same way. You say this may be true in the South, but it will not do up North. Well, Mr. Pond is not in the South, and I want to say again that I am confident my theory is correct, North or South.

I was very much interested in a report from Sweden which appeared in the Canadian Bee Journal for January. The writer says, "Bee-keeping is general here up to 62 degrees. Occasionally bee-keepers are to be found up to the polar circle." Prof. Nordenskold, he says, reports wild bees at the North Cape. "In spite of the cold temperature the bees here winter on their summer stands." When we remember that the winter is six months long in that country, and the mercury ranges from 30 to 40 degrees below zero, we will conclude that there bees would surely need a fire to keep them warm, if bees do anywhere. They do not, all the same, any more than the polar bear needs a fire to keep him warm. Bees will keep themselves warm, if they have access to plenty of food and there are plenty of bees to start with.

I end as I began—What is the straw for?

Canadian Beedom.

Conducted by "BEE-MASTER."

An Echo From Canada—Something Historical.

BY REV. W. F. CLARKE.

BEE-MASTER, *Sir:*—As my apiary is located within the bounds of "Canadian Beedom," it is fitting I should express the pleasure I feel that the editor of the American Bee Journal has had enterprise enough to start a department with this title. I think there must be a number of Canadian bee-keepers who have, like myself, a warm side toward "The Old Reliable."

When I began to keep bees, there was no bee-journal published on this continent so far as I knew. The American Bee Journal was started by Mr. Samuel Wagner in 1861, but owing to financial difficulties growing out of the War, it was suspended at the close of the first year. I began bee-keeping in the spring of 1864. In January of that year, I undertook to edit the Canada Farmer. Looking forward to this undertaking, and feeling that bee-keeping was the only branch of agriculture of which I was utterly ignorant. I bought the works of Langstroth and Quinby, the perusal of which introduced me into a new world. I felt that I must get a colony of bees to see if these things were so or not.

When the American Bee Journal resumed publication, in July, 1866, I subscribed for it and have taken it ever since. Finding there was a volume that had been published in 1861, I got it, and my file is complete so far as the first seven volumes are concerned.

In Feb., 1872, the lamented Samuel Wagner died, and there seemed no one available to take his place. All eyes were turned to Rev. L. L. Langstroth to step into the vacant chair, but his health did not admit of his assuming the responsibility. I was president of the North American Bee-keepers' association at the time, and had recently resigned my pastoral charge. I was laboring under the auspices of the Ontario Government for the establishment of an Agricultural College, and had some spare time on my hands. It was known that I had gained some experience as an editor, by conducting the Canada Farmer for five years, and being, by this time, an enthusiastic bee-keeper, as I have been ever since, I was requested by leading members of the North American Bee-Keepers' Association to take hold of the American Bee Journal. A requisition to this effect was presented to me signed by 28 of the leading bee-keepers who were at the annual meeting of the North American Bee-keepers' Association, or communicated with immediately afterwards. Among them were Rev. L. L. Langstroth, M. Quinby, A. I. Root, Capt. J. E. Hetherington, E. Gallup, Prof. Cook, M. M. Baldridge, and Aaron Benedict. This document will be found in full in the American Bee Journal for January, 1873, and is dated Indianapolis, Dec. 5, 1872.

I acceded to this request, went to Washington, and negotiated with Mr. G. S. Wagner for the purchase of the American Bee Journal, bought it, and removed it to Chicago, edited it for two years, and then transferred it to Mr. Thos. G. Newman, under whose able management it was carried on until it passed into the hands of its present proprietor, Mr. Geo. W. York, June 1, 1892.

I have briefly run over these historical circumstances which are doubtless new to many American and Canadian bee-keepers, to explain the interest I have always taken, and still continue to take, in the American Bee Journal.

I was sorry when Mr. Newman connected a supply business with the American Bee Journal. During my proprietorship of it, I steadfastly refused to do anything of the kind, thinking, as I still do, that it would lessen the independence of the Journal. I was glad when a divorce was effected, and hope Mr. York will be so liberally supported by the bee-keepers of the North American continent that he will be able to maintain the American Bee Journal in its present position of impartial friendliness toward all supply men, without having any personal interest in the goods or manufacturers of any.

I regretted much when Mr. D. A. Jones commenced to cut rates on bee-literature, by starting the Canadian Bee Journal as "the only $1 weekly in the world." The American Bee Journal was then paying fairly well, but I think it has had a hard struggle since, and a shoal of "Cheap John" literature has sprung into existence which has not been for the best interests of the pursuit. Even now, fewer bee-periodicals and of a higher quality would be productive of the greatest good to the greatest number.

I have written this to justify my warm interest in the American Bee Journal, and to give, as I think I have done, good and sufficient reasons for lending my warm co-operation not only to the "Canadian Beedom" department, but to the American Bee Journal as a whole. Personally, I would like to see it restored to its old price of $2.00 a year, at which rate it would be able to employ the best apicultural talent in the world, and tower aloft as immeasurably superior to any other bee-periodical on the habitable globe.

Guelph, Ont., Feb. 9, 1895.

Queens and Queen-Rearing.—If you want to know how to have queens fertilized in upper stories while the old queen is still laying below; how you may *safely introduce* any queen, at any time of the year when bees can fly; all about the different races of bees; all about shipping queens, queen-cages, candy for queen-cages, etc.; all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know—send for Doolittle's "Scientific Queen-Rearing"—a book of over 170 pages, which is as interesting as a story. Here are some good offers of this book:

Bound in cloth, postpaid, $1.00; or clubbed with the BEE JOURNAL for one year—both for only $1.65; or given free as a premium for sending us three new subscribers to the BEE JOURNAL for a year at $1.00 each.

Bound in paper cover, postpaid, 65 cents; or given free as a premium for sending us two new subscribers; or clubbed with the BEE JOURNAL a year—both for only $1.40. Send all orders to the BEE JOURNAL office.

Convention Notices.

CALIFORNIA.—The next annual meeting of the Central California Bee-Keepers' Association will be held in Selma, Fresno County, Wednesday, Mar. 6, 1895.
Lemoore, Calif. J. F. FLORY, Sec.

MINNESOTA.—The regular semi-annual meeting of the Southern Minnesota Bee-Keepers' Association will be held on the first Monday in May, 1895, at LaCrescent, Minn. All bee-keepers invited. E. C. CORNWELL, Sec.
Winona, Minn.

UTAH.—The Utah Bee-Keepers' Association will hold their semi-annual meeting on Thursday, April 4, 1895, at 10 a.m., in the Fish Commissioner's rooms in the new city and county building, Salt Lake City.
Provo, Utah. GEO. E. DUDLEY, Sec.

TEXAS.—The Texas State Bee-Keepers' Association will hold its 17th annual convention at the apiary of W. R. Graham, in Greenville, Tex., on Wednesday and Thursday, April 3 and 4, 1895. All interested are invited to attend. "NO HOTEL BILLS."
Ft. Worth, Tex. DR. WM. R. HOWARD, Sec.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association on March 16, 1895, at Goodno's Hall, in Bronson, Bourbon Co., Kans. It is the annual meeting, and all members are requested to be present, and all bee-keepers are cordially invited. J. C. BALCH, Sec.
Bronson, Kans.

RUDY'S PILE SUPPOSITORY

Is guaranteed to cure Piles and Constipation, or money refunded. 50 cents per box. Send two stamps for circular and free Sample to MARTIN RUDY, Registered Pharmacist, Lancaster, Pa. NO POSTALS ANSWERED. For sale by all first-class druggists everywhere. Peter Van Schaack & Sons. Robt. Stevenson & Co., Morrison, Plummer & Co., and Lord, Owen & Co., Wholesale Agents, Chicago, Ills.
Please mention the Bee Journal. Nov15

EVERGREENS FRUIT AND FOREST TREES

Grape Vines, Small Fruits, Shrubs and Roses. Sample Order No 1: 20 evergreens, seven varieties, including Colorado Blue Spruce, (Picea Pungens), sent to any address in the United States, express prepaid, for $2; one-half of above $1. 36 page wholesale catalogue and "How to grow evergreens" Free. Received highest award at the World's Fair. Large discounts for early orders. Address, Elgin National Nursery Co., Elgin, Ill.

4A8t *Mention the American Bee Journal.*

Annual Catalogues have been received from the following—

DEALERS IN BEE-SUPPLIES.

Leahy Mfg. Co., Higginsville, Mo.
I. J. Stringham, 105 Park Place, New York, N. Y.
The A. I. Root Co., Medina, Ohio.
Emerson T. Abbott, St. Joseph, Mo.

SEED AND NURSERY DEALERS.

Ezra G. Smith, Manchester, N. Y.
D. Hill, Dundee, Ill.
L. L. May & Co., St. Paul, Minn.
Johnson & Stokes, Philadelphia, Pa.

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Des Moines Incubator Co., DesMoines, Iowa.
Reliable Incubator and Brooder Co., Quincy, Ill.
Geo. H. Stahl, Quincy, Ill.

Wants or Exchanges.

This department is only for your "Wants" or bona-fide "Exchanges," and such will be inserted here **at 10 cents a line** for each time, when specially ordered into this department. Exchanges for cash or for price-lists, or notices offering articles for sale, will not be inserted here—such belong in the regular advertising columns, at regular rates.

TO EXCHANGE—Alfalfa Seed and Span of large mare Mules, for Nuclei, Queens and Basswood trees. Alfalfa Circular to all who write. B. W. HOPPER, Garden City, Kans.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Feb. 7.—The weather has been so cold that it prevented the shipping of comb, and the trade has been light to local dealers. Choice white comb sells at 14@15c. There is demand only for that put up in excellent shape. As a rule, dark grades are slow, prices ranging from 9@10c.; good, light color, 12@13c.
Beeswax, 27@28c. R. A. B. & Co.

CHICAGO, ILL., Dec. 27.—Up to the present the sales on honey have met with our expectations. We have received considerably more honey than we figured on handling, owing to the short crop report, and we think the early shippers reaped the benefit. However, we are now getting the average price, viz.: Fancy, 15c.; white, No. 1, 14@13c. Extracted, 6@7c.
Beeswax, 28@29c. J. A. L.

CINCINNATI, O., Jan. 7.—Demand for honey is very quiet since the holidays, and prices are unchanged. Comb honey brings 14@16c. for best white, and extracted 4@7c.
Beeswax is in good demand at 23@28c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, Mo., Jan. 7.—The demand for both comb and extracted is light. Supply good. We quote: No. 1 white comb, 1-lbs., 14@15c.; No. 2 white, 12@13c.; No. 1 amber, 13c.; No. 2 amber, 10@11c. Extracted, white, 6@6½c.; amber, 5@5½c.; dark, 4½c.
Beeswax, 22@25c. C. C. C. & Co.

PHILADELPHIA, PA., Feb. 15.—Comb honey is very plenty and slow of sale at 12@13c. Extracted in fair demand at 5@6½c.
Beeswax scarce at 30@31c. W. A. S.

BUFFALO, N. Y., Jan. 21.—The honey market is very quiet. We quote: Fancy, 13@14c.; choice, 10@12c.; off grades moving slowly, trade being only on fancy; buckwheat slow at 8@10c. Extracted very dull, at 5@6c.
Beeswax, 28@30c. B. & Co.

NEW YORK, N. Y., Dec. 31.—The demand for comb honey has been very light of late and has now almost dwindled down to nothing. The supply has been accumulating and there is a large stock on the market. In order to move it in round lots, it will be necessary to make liberal concessions from ruling quotations. We quote: Fancy white, 1-lbs., 13c.; off grades, 11c.; buckwheat, 9c. We have nothing new to report in extracted. It is moving off slow and plenty of stock on the market, with more arriving. Beeswax is steady and finds ready sale on arrival at 30c. per pound. H. B. & S.

SHIP Your Butter, Eggs, Poultry, Veal, Beans, Potatoes, Hides, Pelts, Wool, Hay, Grain, Green and Dried Fruits, or ANYTHING YOU MAY HAVE to us. Quick sales at the highest market price and prompt returns made. Write for prices or any information you may want.

SUMMERS, MORRISON & CO., Commission Merchants,
174 South Water St., Chicago, Ill.
REFERENCE—Metropolitan National Bank, Chicago.
6A13t Please mention the Bee Jounral.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

J. A. LAMON, 43 South Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAOE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 28 & 30 West Broadway.
CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.

Kansas City, Mo.

CLEMOMS-MASON COM. CO., 423 Walnut St.

Buffalo, N. Y.

BATTERSON & CO., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

Philadelphia, Pa.

WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

Doctor's Hints

By DR. PEIRO, Chicago, Ill.

Red Flannel and Rheumatism.

No, Mrs. Smith. There is no more virtue in red flannel than in white—not a bit. The idea that it keeps off rheumatism is a joke. But it is very proper to wear nice, clean flannel.

Confidential Advice.

You really want to whisper your troubles in my ear, do you? Well, dearie, let it right out, and I will be glad to advise you. Boys and girls need confidential advice just as much as older folks. You can write to me whenever you like.

"Blackheads" on the Face.

"Blackheads" that come on your face are not bugs, but diseased hair-roots. They are due, mainly, to impaired vitality. A cold-water bath twice a week is one of the very best tonic remedies for them.

Headache in Children.

The headache of school-children is often occasioned by retaining the secretions of the nose indefinitely and often "snuffing up." A liberal use of the pocket handkerchief is the best cure.

Hypnotism Dangerous.

Hypnotism is the control of one person's mind over that of another, by which the mesmerized individual becomes, for a time, entirely subject to the caprice of the operator. It is a dangerous experiment, and should not be permitted. The unfailing evidence is in the enlarged pupils of both eyes.

Poison-Ivy.

Well, it is queer that some people can sleep right in a patch of poison-ivy and not suffer a particle, while others are made miserable if they accidentally look at it!

Chapped Hands.

Oh, dear, how those chapped hands hurt! But this preparation is the very best I have ever used: Two drams subnitrate of bismuth, ten drops carbolic acid, and a quarter pint of rose-water. Shake well and rub on the hands.

Remedy for Constipation.

Wheat-bran is an excellent remedy for constipation. A tablespoonful in a glass of hot water, night and morning. A pinch of salt may be added if preferred.

Hair-Dyes.

Uncle Dan wants to know which is the best hair-dye. There isn't any "best;" they are all bad and harmful.

Clam Chowder.

"Clam tonic," eh? The best is prepared in the old-fashioned way, with chopped clams, potatoes and other good things, and is usually called "clam chowder." That the juice alone is a tonic, is sheerest nonsense.

Never Say "Doc."

No, John, don't show your ill-breeding by calling any physician "Doc." It is, as all other nick-names, disrespectful. "Doctor" or "Mister" are the proper terms.

THE KEYSTONE DEHORNER

Cuts clean on all sides-does not crush. The most humane, rapid and durable knife made, fully warranted. Highest World's Fair Award. Descriptive Circulars Free.

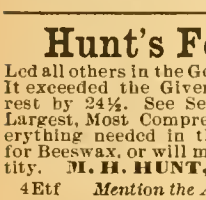
A.C.BROSIUS, Cochranville, Pa.

12E13 *Mention the American Bee Journal.*

Hunt's Foundation

Led all others in the Government experiments It exceeded the Given by 6½ %, and all the rest by 24½. See Sept. Review, 1894. The Largest, Most Comprehensive Catalog of everything needed in the Apiary, FREE. Cash for Beeswax, or will make it up in any quantity. **M. H. HUNT, Bell Branch, Mich.**

4Etf *Mention the American Bee Journal*



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ALL STEEL OR WOOD STEEL LINED.
Perpetual & Large Bale, Steam, Horse & Hand Power. Guaranteed the Best. Write for Catalogue.
FAMOUS MFG. CO., Chicago, Ill.

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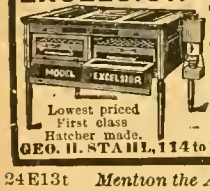
Sections, Extractors, Smokers, and everything a Bee-Keeper wants.—**Honest Goods at Close, Honest Prices.** 60 p. catalog free.

J. M. Jenkins, Wetumpka, Ala.

2E10t *Mention the American Bee Journal.*

HATCH CHICKENS BY STEAM
WITH THE MODEL
EXCELSIOR INCUBATOR.



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GEO. H. STAHL, 114 to 122 S. 6th St., Quincy, Ill.

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BEGINNERS.

Beginners should have a copy of the Amateur Bee-Keeper, a 70-page book by Prof. J. W. Rouse. Price 25 cents; if sent by mail, 28c. The little book and the Progressive Bee-Keeper (a live, progressive 28-page monthly journal) one year, 65c. Address any first-class dealer, or

LEAHY MFG. CO., Higginsville, Mo.

Mention the American Bee Journal.

NEW 68 PAGE CATALOGUE AND GUIDE to Poultry Raisers for 1895. Contains over 130 fine illustrations showing a photo of the largest hennery in the west. Gives best plans for poultry houses, sure remedies and recipes for all diseases, also valuable information on the kitchen and flower garden sent for only 10 cents. John Bauscher, Jr., P. O. Box 5 Freeport, Ill.

24E7t *Mention the American Bee Journal.*

WOVEN WIRE FENCE

Why pay 60 to 90c. a rod for fence when you can make the best Woven Wire Fence on earth, horse high, bull strong, pig and chicken tight, for

13 to 20c. A ROD?

A man and boy can make from 40 to 60 Rods a day. Over 50 different styles Catalogue Free. Address, KITSELMAN BROS., Ridgeville, Indiana.

Mention the American Bee Journal.

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Stamping Sections of Honey.

Query 959.—Two neighbors differ in regard to stamping sections. One puts his stamp on all sections, before they are made up. The other stamps only such sections as are filled with first-class honey. Which is right? And why?—W. M. R.

Rev. M. Mahin—It is a mere matter of fancy and convenvience.

R. L. Taylor—It is a matter of fancy. Let each one please himself.

Eugene Secor—Both. They have a perfect right to do their own business in their own way.

E. France—If I put honey on the market I stamp it with my name, but grade it 1st, 2nd and 3rd.

Dr. J. P. H. Brown—I have never stamped any, but I should only stamp those that were filled, and the ones for sale.

B. Taylor—I would prefer to stamp the honey after it was stored. I take care to have my stamp on superior goods only.

G. M. Doolittle—I can see nothing along the line of right and wrong to hinder any one doing as he pleases about stamping sections. Can any one?

Mrs. L. Harrison—It might be well to stamp all sections, and educate consumers in the different kinds of honey. I see no wrong, only a matter of choice.

Prof. A. J. Cook—I see nothing wrong in either. If you do, do not do it. If some one orders of No. 2 such honey as he labels with his stamp, he should seod as good.

W. G. Larrabee—I prefer to stamp only the marketable sections, for otherwise the stamp is liable to be blurred with propolis, or scratched off in cleaning the section.

Mrs. Jennie Atchley—If he sells his second-class sections he should stamp them the same, but I would not stamp until filled. Put your stamp on all you sell, good or bad.

J. E. Pond—This is an individual matter. I don't know that there is any question of right or wrong about it. Of course, stamping only first-class honey will keep up a reputation.

Dr. C. C. Miller—Either is right. The stamp of the first shows that it's honey of his producing, that of the second that it's some of his best producing. Perhaps the second is the better way.

Mrs. J. N. Heater—Stamp everything that goes on the market, and send nothing out that you would not be willing to own as your own honey. Every section thus stamped is an advertisement for you.

H. D. Cutting—It depends upon your market. I had honey at the World's Fair with the producer's name on a beautiful label put on every section, and one buyer did not want it because of the label.

Rev. Emerson T. Abbott—This is not a question of right or wrong in a moral sense, if that is what you mean. People who want to cater to the best trade prefer not to stamp anything but first-class goods. They put all other on the market without any name, to be sold at a reduced price to those who want that class of goods, and I cannot see that any harm is done to a customer by so doing. I do not put my name on any poor goods, if I know it.

J. A. Green—I should advise stamping only such as are first-class, unless the stamp indicated the quality. The stamp is useful only as an advertisement, and it ceases to have any value when placed on a poor article. Besides, it is apt to mislead the consumer.

James A. Stone—The latter—because he harms no one by leaving his name off the bad ones; but he harms himself by putting it on. Then sell each ou its merits. I have stopped putting on my name—still they find out whose it is, and enquire for my honey.

C. H. Dibbern—I used to stamp my sections before getting them filled—"Choice White Clover Honey"—and sometimes got nothing better than "honey-dew" in them. I now only stamp sections after they are filled, which does not *misrepresent* the quality.

G. W. Demaree—You must decide this matter for yourself. The principle of "right" is a "jewel" of high value, but not sought after by many. I put my *label* on all the honey I send to market. If it is not first-class, I do not recommend it as such. But I hold myself responsible for all the honey I sell. Is not this right?

P. H. Elwood—That depends upon the reason for stamping. If he is troubled with thieves, he can trace his honey better if all are stamped. There is no objection to his stamping second quality honey. There is a demand for second quality, and if he markets a good grade the marking will help him. If not, the mark will help some one else.

Wm. M. Barnum—The stamp is put on as an advertisement; and surely he who advertises his name along with a poor quality of goods is a very poor business man. Consumers want good honey—not bad; and the object of the stamp is to let them know where they can get it. The other kind of advertising is apt to work in a way the advertiser will not relish: the consumer will avoid his "goods." Advertise! but let only that which is "extra fine" go out in connection with our advertisement or name. This is the "secret" of successful advertising.

Mention this paper

EVERGREENS!

Headquarters in the United States for all varieties and sizes of Hardy Nursery grown evergreens and ornamental trees. Prices the lowest. Six $5.00 and $10.00 bargains. Over ten million evergreens and a large stock of other trees. Illustrated catalogue free. I want a good Local Agent.

D. HILL, Evergreen Specialist, Dundee, Ill.

8A10t Please mention the Bee Journal.

Mention the American Bee Journal.

J. C. WALLENMEYER,
EVANSVILLE, IND
26E13t

Makes a hit wherever sung. Price 40 cents postpaid. Reduction to Music Teachers. Published by

QUEENIE JEANETTE!
—A WALTZ SONG—

HAVE YOU HEARD THE LATEST?

Largest Factory in the West. —COMPLETE STOCK.— Good Supplies and Low Prices—Our Motto.

We are here to serve you, and will, if you give us a chance. Catalogue Free. Address. Mention this Journal. LEAHY MANUFACTURING CO., HIGGINSVILLE, MO.

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If you care to know of its Fruits, Flowers, Climate or Resources, send for a Sample Copy of California's Favorite Paper—

The Pacific Rural Press

The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.40 per annum. Sample Copy Free.

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220 Market St., - SAN FRANCISCO, CAL.

BEESWAX WANTED!

For Cash at Highest Price;

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Don't fail, before buying or selling, to write for Prices and Samples—to

GUS DITTMER,
AUGUSTA, WIS.

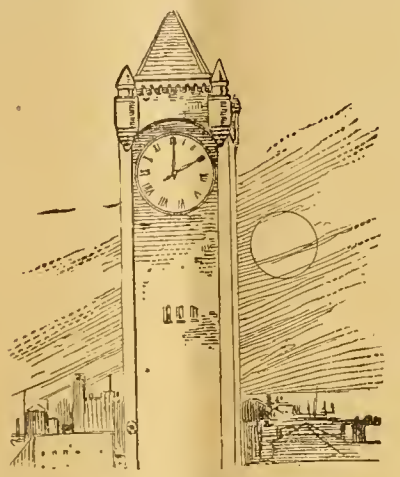
Reference—Augusta Bank. 16Atf

Mention the American Bee Journal

HONEY FOR SALE.

I have about 3000 lbs. of Basswood Honey for sale at 7 cents per lb., in 60-lb. cans, on board cars. I will guarantee it strictly pure.

2A **John Wagner, Buena Vista, Ill.**



It's High Time

To prepare for next Season's Honey Crop. Hives, Sections, Foundation, and all needed Supplies for the Apiary should be on hand when wanted. I can supply you promptly. "Bees and Honey," bound in cloth, presented on orders of $10 and over.

☞ Catalogue free on application.

Thos. G. Newman, 147 South Western Ave. **CHICAGO, ILL.**

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Heber, Utah, Oct. 9, 1894. J. A. SMITH.

Now, didn't I tell you it would pay to ship Bees north to build up and catch the honey-flow? **Bees by the Pound,** on a Comb and Honey to last the trip—$1.00; 10 or more Pounds 90c. per pound. **NUCLEI**—$1.00 per Frame; 10 or more Frames, 90c. each. Untested Queens to go with them [same as Mr. Smith got] 75c. each.

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TESTED QUEENS—3-Bands, $1.50 each; **5-Bands** and **Carniolans,** $2.50 each. **Fine Breeders,** of either race, or **Imported Queens,** $5.00 each. My **Straight 5-Band Breeders,** $10.00 each.

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JENNIE ATCHLEY, Beeville, Bee Co., Tex.

General Items.

Timely Rains in California.

We are having timely rains in abundance so far this winter, and should they continue through the usual rainy period into March, or April, we shall expect a good honey year. There is, to my mind, however, a possible barrier to anything like an extra honey season, existing in the condition of the shrubbery (on which we rely largely for our honey), because of the very dry season just past, which seems to have operated sadly against the growth of new wood in sufficient amount to furnish the standard amount of flowers and flowering wood. ALLEN BARNETT.

Whittier, Calif., Jan. 16.

A Beginner's Report.

I started keeping bees last spring (what a poor year to start!), buying two colonies, one in a box-hive, which I transferred, then I increased it to two colonies. The other hive was fitted with Simplicity frames. I got 60 pounds of comb honey, and increased to five colonies. How is that for a beginner? HERBERT S. JONES.

Ludington, Mich.

Rather Discouraging for Some.

The bee-business has been rather discouraging in Nebraska for the past four or five years, to any one who has depended upon it in any sense for a living; and I cannot see much hope for the future, in this part of the State, unless alfalfa is cultivated plentifully as a hay and forage crop.

As for myself, keeping only a few colonies, more for the pleasure than the profit, I don't share the gloom of the larger bee-keepers here, who say that their bees don't pay for the attention they must give them, much less prove a source of profit. And then, one can have as much *fun* with a few colonies as with a thousand, and much less expensive. I have 3-banded Italians, and want nothing better. They winter well on the summer stands, and come out booming in the spring. I always stimulate them in the spring, and when there is no honey-flow in time to have the hives *full* of bees when it does come. C. O. CORNELIUS.

Ashland, Nebr., Jan. 21.

Honey-Dew on Beech Leaves, Etc.

Whoever heard of the like? My bees worked on them from sun up till sunset. They worked more on some trees than others. Upon close examination, I found that the leaves were curled or rolled up about ⅛ of their size, and in the inside of the rolls were dozens of small, greenish-white lice, that deposited little round globules of liquid, and upon shaking the leaves they would roll out like small shot on my hand. The heat of the hand would soon cause them to melt. The fluid was nearly transparent, but the "honey" that the bees stored was dark, like buckwheat honey. It is tough, almost like taffy, but has a sour, nauseating taste.

Some of the bees worked on the beech leaves right through white clover and basswood bloom. It seemed as though there was not much honey in the clover and basswood blossoms this year, although the trees were loaded with blossoms. So I got only about 150 pounds of nasty, sour, nauseating honey-dew. I don't know how the bees will winter on it; most of them seemed to have plenty of stores for their own use.

I had 17 colonies, spring count, and they increased to 26, besides several swarms went to the woods. I winter my bees on the summer stands, and, as a general rule, successfully. Last winter I did not lose any. I use the Falconer chaff hive, mostly, and work for comb honey only. My bees have had several nice, cleansing flights through December, but now we are having a foot of snow, and 7 degrees below zero.

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By A. I. ROOT.

It is a Cyclopedia of everything pertaining to the care of the honey-bee; it contains 400 pages about 6½x10 inches in size, and nearly 200 illustrations. Now is your chance to get it—**and not cost you a cent!** The regular price of this book, bound in cloth, is $1.25. Below we tell how you can get it free:

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My secret is to sell an extra-large amount, which enables me to sell at low prices. Will run this spring 350 Nuclei—have 1 home and 4 out apiaries. **Booking Orders Now**—will begin shipping March 1st. No Queens superior to my Strain.

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5Atf *Mention the American Bee Journal.*

One good point I noticed in favor of the much-abused black bees last summer. Right in clover bloom we had a cold rain—it really was a little chilly, and the sun did not shine after the rain was over. But the black bees were just as busy bringing in honey as any days when the sun shone; while their yellow-banded cousins staid right at home in their hives. So the black bees must be warmer blooded. Another trait—they can beat the "yellow bands" in storing nice, full sections of honey, with nice, white, smooth cappings, which makes it pass as No. 1. I find the blacks a little harder to handle, but they are not so much inclined to swarm. I have mostly Italians and Carniolans; some of them I can handle without using a veil or smoke.

I have had about 10 years' experience with bees, but so far I have never had any large surplus honey crops. I don't believe that this is one of the best places for honey. We have quite a number of farmers here that keep bees, and I am the only one that takes a bee-paper—the rest "know it all by heart." They never look at their bees unless they swarm, or when they want to get some honey. They say the papers are only printed to make money. But to their sorrow, the most of them lost their bees the other winter, for want of care, and then the next season they let the moths destroy the combs, and frames also; and now they say there is nothing in bee-keeping—it doesn't pay! E. J. FUSSELMAN.
North Jackson, Ohio, Dec. 31.

Indignant Emm Dee.

(See page 56.)

Indignant Emm Dee is as mad as can be.
And fain would the myst'ry unfold.
In regard to the plan, for selecting a *man*,
With the *woman* left out in the cold.

If Indignant Emm Dee will please write to me,
I will send a poetic effusion,
Containing a *key*, that Indignant Emm Dee
May arrive at the proper solution.

Morenci, Mich. W. S. G. MASON.

Los Angeles County Convention.

The Los Angeles County Bee-Keepers' Association, at a meeting held in Los Angeles, Jan. 12, 1895, endorsed a resolution which was introduced by N. Levering, requesting the State Bee-Keepers' Association to memorialize both the State Legislature and the National Congress, to enact suitable laws to suppress the adulteration of food.

A committee of five was appointed, to formulate a constitution and by-laws suitable for the organization of a Honey Exchange, and report the same with all matters of cost of incorporation, etc., to the next meeting. The committee are: Geo. W. Brodbeck, Dr. G. A. Millard, N. Levering, W. S. Squires and G. B. Woodberry.

The meeting then adjourned to the first Saturday in March, 1895.
Whittier, Calif. ALLEN BARNETT, *Sec.*

Dry Seasons—Negligent Bee-Men.

The season of 1894 was a failure here so far as honey was concerned; and I might add that for the last three years there has been but little surplus honey gathered in this county (Jersey), except along the river bottom. The dry summers and falls have killed the white clover to such an extent that the prospect for a crop of honey the coming season is not very flattering. Generally speaking, bees went into the winter in good condition, having gathered enough in August and September to winter them, although a great many of the farmer bee-keepers have let their bees die out during the past three or four seasons. It is only those that have attended to their bees, and fed them, that have any bees left.

I love to read Dr. Gallup's articles from California, even if it does have an irritating effect on the nervous system of "Business." I would suggest that all articles from that State on soil, climate, etc., be headed in large letters, "FROM CALIFORNIA," so that "Business" could skip them; but I feel assured that a majority of the readers will gladly read them.

The winter, so far, has been very favorable here for years—very few dead bees in the hives yet. We have had no snow here, and very little rain, and it is thought by some that the growing wheat is considerably injured, as the ground is dry and cracking. H. D. EDWARDS.
Delhi, Ill., Jan. 21.

Carniolan Bees Great Swarmers.

From what I could learn at Mrs. Atchley's bee-convention, the Carniolan bees are all right to increase your apiary, but are too much on the swarm to be profitable honey-gatherers. O. H. STEVENS.
Normania, Tex.

Bees Did Well Last Season.

I notice that Mr. Adkin's bees at Street Road, 2½ miles from my place, didn't do very well last season. My bees stored, on an average, 72 pounds of comb honey per colony, with plenty of honey left for winter for themselves. I examined them to-day, and found them all in first-class condition, and full of bees. They are on the summer stands in chaff hives.

GEO. W. STEWART.
Ticonderoga, N. Y., Jan. 22.

They Wish They Had Fed.

The prospect now is that we will have an A 1 year. I examined my bees in their winter quarters at National City, on New Year's Day, and found a number of them with one and two frames of brood, and considerable new honey from eucalyptus. A good many bee-men have lost 50 to 75 per cent., and they wish now that they had fed.

ARTHUR HANSEN.
San Diego, Calif., Jan. 16.

Well Satisfied—Wintering Nuclei.

In the fall of 1893 I placed 93 colonies in my bee-cave, and took out 91 alive. I found 10 queenless. After looking them all over, and getting them in good condition for work, I had 78 colonies, 4 of them being small, but I kept them in case I needed a queen. These 4 gave me no surplus honey, but the 74 gave me 2,400 pounds of comb honey and 400 pounds of extracted. I am well satisfied, for the last was the driest summer I ever saw.

I put into winter quarters 140 colonies in good condition, with plenty of good honey. I put in 10 nuclei to see whether they would winter, so as to have some nice queens for spring use. JOHN TURNBULL.
La Crescent, Minn., Jan. 23.

An Experience in 1894.

I don't believe the readers of the Bee Journal have heard from me since I moved my bees to this place, over about 30 miles of rough road in a wagon, now nearly a year ago, and some of them may conclude that I have either run away or given up bees entirely. But not so; I am still in the business, and, as they say, "have come to stay."

I brought 12 colonies to this place last spring, took 12 others on shares, which I transferred into dovetailed hives in April. On June 10 they were barely living (and, by the way, that is robbing time here, under the old school), but about July 1 they commenced rolling the honey in, and my! you never saw the beat of that. Well, I found out what they were doing, and about the last of July I concluded I would *buy a few bees.*

(You know it isn't every one that knows all about bees, nor no one that knows it all about them.) One of my neighbors had 8 colonies in box-hives, and 6 swarms in

Root's dovetailed hives, with supers, sections, etc., for comb honey. Well, I paid him $20 for the whole outfit, and got a new "A B C of Bee-Culture," a new smoker, veil, etc., "to boot." I then transferred the 8 colonies in box-hives into Root's hives, and got 280 pounds of nice extracted honey—I mean extracted the old way; and the 6 swarms stored over 100 pounds of fine section honey, besides I extracted some from the brood-chambers. The bees are all alive yet, and will go through safe, if there doesn't come too much more cold weather.

My entire crop, after paying one-half the honey stored by the bees I took on shares, was 1,500 pounds, and I now have 37 colonies in good condition. C. H. COLEMAN.
Shawanee, Tenn., Jan. 22.

Snow and Cold Weather.

Bees are in good condition up to date. We are having snow and cold weather. It is 15 degrees below zero. CHAS. RINCK.
W. Alexandria, Ohio, Feb. 6.

Honey from Muskmelon Bloom.

I have 12 colonies of bees now. I had 17 last spring. The wind blew so hot July 26, that the combs fell to the bottom of the hive and killed several colonies. I had only two swarms last season. This is a great seed country. I think our bees gather as much honey from the muskmelons as any one plant we have, as they have fresh blossoms every morning. If some of the bee-keepers would try one-half acre for an experiment, I think it would be very profitable, as the melons are very good feed for milch cows, if no other use can be made of them. F. E. LOCKWOOD.
Waterloo, Nebr., Jan. 30.

Cold Winter—Bees Doing Well.

We are having a very cold winter, with more snow than we have had any winter for several years, but my bees seem to be doing very well. I have not lost a colony so far. W. S. FEEBACK.
Carlisle, Ky., Feb. 6.

White Comb from Sugar Syrup.

I have read the article by J. W. Southwood (page 51) on rearing brood on sugar syrup. I have tried granulated sugar, both fall and spring, and it is very good for rearing brood, but there is another point I would like tested, viz.: The bees will make the nicest white comb when fed on granulated sugar syrup. In the fall there are from 4 to 5 weeks that bees could be fed on sugar to make comb for use the next year. PETER STEINEBACH.
Colby, Wis.

Bee-Keeping in North Dakota.

There are but very few bees in all this north country. I commenced last spring, and have had a bright experience so far. I lost the first two colonies in transportation, and then went myself and got another. I put 5 colonies into winter quarters in good condition. I had 32 sections of surplus honey. JAS. B. JUDD.
Fargo, N. Dak., Jan. 31.

Never Lost a Colony in Wintering.

My crop, last season, was 1,400 pounds of extracted, and 600 pounds of comb honey in one-pound sections, almost all basswood and sweet clover. Bees got little or nothing out of white clover in northwestern Ohio.

For the five years I have kept bees, I have not lost a full colony during winter. They winter outside in a 2-story double-walled hive, 19 inches long, and 11 deep, well painted outside; a pillow of dry maple leaves over the brood-frames, large enough to fill the upper story, and 8 frames of the above-mentioned size ¾ sealed honey. They will then "get there" in good condition if it comes down to 20 degrees below zero, and three months steady winter.

My 25 colonies of bees came through last winter in good condition, and gave me 2,000 pounds of surplus honey last summer, besides increasing to 30.
HENRY BOHLMANN.
Defiance, Ohio, Jan. 21.

Wintering Nicely.

My bees are in very fine condition, and wintering nicely. R. S. RUSSELL.
Zionsville, Ind., Jan. 29.

An Experience with Bees.

I have kept bees several years in box-hives, and that was all the good it did. I would put a little cap on the hive, and if they put a pound or two in it, it was all right, and if they did not it had to be all right. So last spring I got a few Langstroth hives, and hived the swarms in them. I have 11 colonies, 5 of which are in box-hives. I purchased 4 colonies on July 3, 1894, and one of the queens died, but two of the other three gave me 86 pounds of honey, and the other 108 pounds. GEORGE SAGE.
Linton, Ind., Jan. 26.

Lost 2 Out of 18 So Far.

We have 16 colonies left out of 18. They are in chaff hives, the tops filled with shavings. I would like to know how W. S. M.'s bees (see page 70) are getting along in New Mexico. MATTHIAS WECHSLER.
Sterling, Ill., Feb. 2.

Bees in Fine Condition.

I started in last spring with 5 colonies, and increased to 8, from which I took 300 pounds of comb honey. I have sold the most of it for 15 cents per pound among my neighbors. I had about 40 pounds of golden-rod honey, which is the thing. We have lots of basswood and clover here. There has not been much snow so far this winter. My bees are in fine condition now, on the summer stands. H. J. SAMSON.
E. Middlebury, Vt., Jan. 28.

Basswood Honey—Wintering Bees.

I had from 100 colonies over 4,000 pounds of all basswood comb honey. I wintered 74 colonies last winter. I have 100 colonies in the cellar now, all in good condition. The fall crop of honey was not 10 pounds. I have one of the best cellars in this town. It is built of stone and cement, and ventilated especially for bees. It is 18x24 feet.

My business is bees and small fruit, and they go finely together. I think I have one of the best plans for wintering bees. I use common building paper (no tar), and put it over the frame, then two strips of lath on the sides and ends of the hive. The latter should be 2 inches short, for ventilation. Try this plan, leaving the entrance open. If you have trouble in wintering bees with tight covers, try paper and report.
C. A. GOODELL.
Mankato, Minn., Jan. 31.

The Season of 1894.

The seasons the last two or three years have been so poor that even the bees could, or did, hardly make a living, not to mention their keeper. The cold, wet spring last year destroyed the fruit-bloom and nearly all the white clover. It was necessary to feed the bees to keep them alive, or from starvation, in the spring and summer. I allowed my bees (40 colonies) to swarm very little—had 4 or 5 swarms, I believe. In the autumn the bees gathered enough to keep them through the winter, and about 300 pounds of surplus honey.

I am wintering my bees on their summer stands with the precautions necessary. The winter is somewhat severe and cold, and no doubt the bees will suffer, too. We have had four big snows, and very cold weather for southern Indiana. I hope the next season will be better than the three preceding ones put together. AREND NYHUISE.
Chandler, Ind., Jan. 28.

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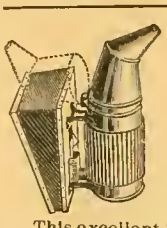

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THE OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS

35th Year. CHICAGO, ILL., FEBRUARY 28, 1895. No. 9.

Contributed Articles.

On Important Apiarian Subjects.

Marketing the Honey-Product.

BY W. M. BARNUM.

Circumstances have brought this matter actively to mind during the past two or three days, and I wish now to say a few words in regard to it. In talking with a friend a few minutes ago, he suggested that the subject would probably be of little utility to the majority of my readers this year, (1894); but I am but little inclined to take him at his word, for like the foolish fisherman, he is about to sell and *give* away his stock-in-trade and quit the business. He has realized but $7.00 or thereabouts, from his bees for the past four seasons, and thinks it a good time to quit. He has lost money, but in that lieth the very reason why he should hold on to his bees; for the time would surely come when he would realize handsomely on his investment. Surely, no one is so foolish as to believe that flowers have ceased forever to give forth nectar! And

Wm. M. Barnum, Denver, Colo.

yet it would seem, from such actions as those of my friend, that such belief is current among certain of the people.

Now, as to marketing: I believe as a rule, it is more difficult to dispose of the article to *best* advantage than to produce it. And right here is where the majority of us are too negligent; failure to properly prepare and market our product is perhaps one of the greatest detriments to our pursuit. The merchant will invariably tell us that it is *appearance* that sells an article; we must put up our honey in attractive packages—neat and clean. We must grade the honey with care, never purporting that the grade is better than it is. Deception is fatal to all things. We should have our name, name of apiary, and complete address, either stamped or printed upon gummed slips, that the purchaser may know who the producer is and where he may be found.

Samuel Irwin Freeborn—See sketch on page 137.

By proper management a select and very profitable list of customers may in this manner be easily worked up.

It will pay in the majority of instances—when possible—to deliver personally, by wagon, to your customers,—working up a special route of your own. A much better price can then be obtained, doing away with the middleman's profit; and you will find that your customers will be only too willing to pay a couple cents or so above market price for that which they know to be good and "gilt-edged." At the same time, garden, dairy and other farm produce can be disposed of at increased profit. All left over can be sold to butcher or grocer, or left with them on commission. It might be well to keep a small stock with them continually; and I think commission sales will as a rule prove more satisfactory.

All this is, of course, like tinkling cymbals, if your product is *nil*, of poor quality, or if you live out of or at an inconvenient distance from your market. Then you must do the next best thing. When it becomes necessary to deal with a commission man, it is best to make the bargain on the ground, face to face. Afterwards, it will do no harm to keep "an eye on the man." There are some honest ones among them, but not all will come under that head. It is well, therefore, to keep posted on the market prices, returns, etc., in as

many ways as possible. In the meanwhile, don't neglect your "home market;" get all there is out of it—*cater to it.* If they want one-pound sections, provide them; if extracted, provide it, and so on. Educate them in every way possible; procure a few small glass (or otherwise suitable) receptacles, and distribute them *gratis* among the doubtful class. Do not fail to give them a good quality of honey, put up neat and clean, with your *name and address* upon it in conspicuous manner.

These are a few of the essential things to be observed in marketing your crop. Perhaps some of the brethren can suggest other points of value. I want to see this subject discussed in the columns of the American Bee Journal, and now is the "acceptable time." I will continue the subject in a near number, as there are many points I have not now time to further consider. Denver, Colo.

Something in Defense of Honey-Dew Honey.

BY STANLEY & SON.

We have kept silent a long time on a matter that we have often thought ought to receive more generous treatment; that is, "honey-dew honey." Why should it be called so many bad names? Every few weeks some contributor to our bee-literature takes a lick at this poor orphan, and, every time it is done, we have thought we would rise and say a few words by way of protest against this heartless treatment accorded it.

To us, honey-dew has been a friend that sticketh closer than a brother. Without it we should have been compelled to abandon the honey-business. We have been in this business extensively for some 12 years, producing in that time about 120,000 pounds of comb honey and some extracted honey, and of it all not more than 20,000 pounds has been clear, while another 15,000 or 20,000 pounds has been from poplar, leaving honey-dew to furnish 80,000 pounds, which we have sold at an average price of 12½ cents per pound, only some 4 cents less per pound than we have gotten for our clear and poplar honeys, on an average.

This, like all bad children (with only one father and mother) has grieved us sorely at times, costing us the loss of our apiaries almost entirely two or three winters—those of 1884, 1885, and 1891, being the worst; but when we think of what good it has done us, we do not have the heart to chide.

The season of 1887 here was practically a failure, and our apiaries were on starvation the first of October. There was but one recourse, we thought, and the feeding of sugar was always repugnant to us, it being still more of a nuisance to apiculture than honey-dew, in its way; when lo! what should happen but a nice honey-dew to show up on the hickory leaves, and supply our bees with winter stores before frost could catch it?

Then, again, last year we moved two carloads of bees and hives to Mont Eagle, Tenn., a picturesque little village on the Cumberland plateau. Well, the March freeze killed the poplar and locust, and our bees were on their last rations, when the linden came in, followed by sourwood; but our "old friend" followed up, and gave us more honey than both or *all* others. We are getting 12½ cents for it again this winter. "Holy Moses!" say some of you, "where can you sell it?" Well, there are a few places left where our bee-papers do not go, and they have never heard that it was a vile and filthy stuff, but think it a good, cheap honey. Now, gentlemen, won't you stop this? Please do, for this unfortunate child has *good* as well as *bad* qualities.

Are you prepared to say that this honey, distilled from Heaven, is less pure than the cheap sugars, syrups, etc., on the market, manufactured we know not how? Do we see any of their papers characterize it as vile or filthy stuff? No, it is sold on its merits, and that is what we ask you to do for honey-dew honey, without partiality or prejudice.

We have said that sugar was a nuisance to bee-keeping. We believe it is. What would the ordinary grocer think if he should pick up one of our periodicals containing a description of the now famous percolator system, warranted to feed a barrel of sugar per day? We have heard it said already that the dark honeys were the only pure ones—of course we know better, but we can't expect others to know.

Apropos to the discussion of East Tennessee mountain society between Messrs. Getaz, Coleman and Webb, we consider them all perhaps right. In the villages and towns we find it good and improving, while if one would go where the timber has not been disturbed, to secure the best results he must be prepared to rough it. Though he will find the people very kind and hospitable. Fairfield, Ill., Jan. 25.

Wild Bees and Other Matters.

BY J. W. ROUSE.

Every once in awhile I see something said about wild bees. I do not know if I ever saw any wild bees unless the blacks are wild, as they usually run pell-mell when the hive is opened and one undertakes to manipulate them. I believe it makes but little difference where bees are only handled occasionally, but if handled almost every day they might become used to it. The life of a bee in the working season is so short that I do not believe they become gentle, or otherwise, but I think the temper is very largely due to the queen.

I have taken many bees from trees in the woods, and also transferred very many bees that practically would be no more domesticated than if in trees in the woods, as they got no attention, but I have never been able to see any difference in these bees, in their actions, over bees that were called "domesticated," so that I do not believe there is any difference, whether bees are in the woods or in a yard, unless handled every day, and perhaps none, even then, as I have always had to handle vicious bees with smoke whether in the bee-yard or in the woods. But, as before stated, the temper is very largely due to the queen, the time, temperature, and whether the bees are at work or not, and the way they are approached having the most, if not all, to do with their amiableness.

PREVENTING THE SOILING OF SECTIONS.

I notice what Mr. Scott has to say in regard to stained sections, in the Bee Journal for Jan. 17. I have given this subject much thought, and had meant to experiment some on this line the past season, but as I worked my apiary for queen-rearing, and being a poor honey season here, I made no experiments in this line. I would take the section slats for the bottom-bar or the sections to rest on, and use separators 4¼ inches wide, with insets corresponding with the sections, and would use a follower both at the side and end, and thus wedge or key both ways, and not use end-bars in the section-holders at all. This would close the sections true and square, and the bees could touch the sections only at the place of entrance and inside.

It is impossible to so nail the section-holders with end-bars so that it will fit the sections, as a very little variation, either damp or dry, will not allow the sections to fit every time. With an end follower it is less pieces to a hive, besides the sections can be taken out of the super easier. Either closed-top sections could be used, or slats to cover the top of the sections, if so desired, to keep the top of the sections clean. I do not claim originality in this plan, but I believe it would remedy the difficulty.

THE MORRISON DOVETAIL.

In the proposed dovetailed corner, as given by Mr. Morrison, on page 36, I do not consider it a practical corner to make, as the strip or tongue to go in the groove or dovetail would be very easily split if it run lengthwise or with the grain, and if cut across the grain it would be easily broken in trying to put it in the groove or dovetail, unless loose, which would, if loose, not hold the corners tight together.

Mexico, Mo.

Another Kind of Migratory Bee-Keeping.

BY JOHN M'ARTHUR.

On page 405 (1894) are the following questions propounded by Charles F. Jaessing, asking that they be answered. In reply I would say that I am willing to answer any questions pertaining to the above subject through the American Bee Journal. A description of the undertaking will be given in detail later; in the meantime I will answer Mr. Jaessing's questions so that any bee-keeper wishing to try the migratory system may be able to glean a little information that may assist him in the undertaking.

QUESTION No. 1.—Will it be necessary for one to go personally and purchase the bees, and then accompany them all the way to their destination?

ANSWER.—It would be better to go personally and purchase the bees and accompany them to their destination, or procure the services of some reliable man who has had practical experience in the matter.

QUESTION No. 2.—Did you purchase the hives, as well as the bees, or did you ship them in light shipping-crates, and then transfer them into hives of your own?

ANSWER.—Bees and six frames of brood in Langstroth frames were purchased; they were shipped in light crates, and then transferred at home into proper hives.

QUESTION No. 3.—Please describe your method of preparing and shipping the bees, the number of colonies that can be put into a car, and cost of shipping a carload that distance? (Tennessee to Toronto, Ont.)

ANSWER.—The shipping-crates consist of two end-pieces 10x12⅛x⅝ thick, two sides 12x19¼x⅜, the two end-pieces 10x12⅛. The frames rest on this, requiring 5x12¾x⅜ pieces to be nailed outside, closing the ends, and forming a cleat to lift the crate by. It also strengthens the crate. If the frames are of uniform thickness, a lath 1x1⅛ inches wide, and 12⅛ long, may be laid on the end of the frames, and nailed through each frame into the rabbet. Light wire staples may be used as spacers, or nails driven through the ends and front of the hive may answer. I have had them come safely 1,000 miles farther without any spacers. Wire screens should be made to rest on the top and bottom, and not nailed dead to the crate, so they can be taken off easily and be used again. The crates may be used for surplus supers by ripping off the extra depth at top and bottom. Have an auger hole, 1½ or 2 inches, in front and rear; these the bees use while getting ready as flight-holes; then cover with wire netting. They should be two inches from the bottom. Often many bees accumulate on the bottom screen, and it prevents free ventilation. These holes are safety-valves. Have everything so arranged that the nailing will be reduced to a minimum while the bees are in the crates. That is to say, have no unnecessary nailing, keeping the bees as normal as possible—they will have enough to irritate and wear them out in transit. Two crates can be attached—one on top of the other—by laths, allowing the bottom crate to be two or three inches off the floor, and from four to six inches between the two, nailing a lath up each corner, thus completing a double crate. Thus arranged you can put 200 into a large fruit-car. By three-story crates you can ship 300. Have the frames pointing toward the engine, and stay them with laths across the car and longitudinally. Get a car with as much ventilation as possible, and be sure the bees have plenty of food. Don't crowd too many bees into a crate. Of course it is bees we want, but a very great mistake may be made by overcrowding. A car may be chartered with an attendant in the neighborhood of Memphis, Tenn., to Toronto, for the sum of $135.

QUESTION No. 4.—And lastly, will Mr. McArthur, or any Southern reader of the American Bee Journal, please answer whether plenty of bees on good comb and Simplicity frames can be purchased in the latitude of Tennessee, or thereabouts? Also the range of prices in May.

ANSWER.—That depends greatly upon the season and demand. Last season it would have been difficult to purchase in Tennessee, but in Louisiana they were plentiful. As to price, that depends upon how you can buy. Prices fluctuate, but they will cost no more than 2-pound or 3-pound lots with queens, if you go direct to the producer, and assist in preparing for shipping.

What we want in the North is bees to build up our weak colonies, so as to give us surplus from our earliest blossoms, and if our Southern brother bee-keepers would turn their attention to the production of bees at as low a figure as possible, there would spring up a great industry in supplying us poor fellows in the North who are ice-bound in the spring. The honey-flow would be over in the South before we would require them, thus enabling the bee-keeper to dispose of his surplus bees at a low figure, saving the trouble and pain it gives in annihilating them. Such undertakings have been successfully carried out.

Being interested in three of those ventures, it would be needless to say that all proved successful. Each left a lesson as a beacon to prevent disaster and failure in the future.

Let me here say there is considerable labor connected with this business, and none should attempt such undertaking but those that are experts in the business. I take no credit myself for the last consignment, its condition when it arrived being all that could be desired—not a single comb being broken. Honor to whom honor is due. The consignor and W. O. Leach, who accompanied them to their destination, have the credit, and well deserve it. In the meantime negotiations have been carried on regarding a consignment for next May.

Before concluding it may be profitable to some to mention a little incident that occurred when the bees were liberated, which taxed my ingenuity to its utmost. The day being bright and warm when given their liberty, many swarms issued—there might have been 20. Pandemonium reigned. They formed one mammoth cluster; many flying that had not located their hives, joined in the grand procession, which had already reached enormous proportions—about 10 feet in length by about 4 feet through at the upper end, tapering to the ground, with quite a train on the grass. Being as much excited as the bees, I neglected to have its photograph taken. This little episode can be better imagined than described. Investigation showed the cause to be the hatching out of young queens on the way. Therefore care has to be exercised in giving them their liberty, either by putting them into the cellar and cooling them off, or liberating them in small numbers at a time, or in the cool of the evening. It was a late hour before they were all divided up and gotten into hives. I hope never to see a repetition of the same.

If one bee-keeper cannot see his way clear to get a carload of bees, then say 5 or 10 may in one locality mutually agree to do so. It certainly is much cheaper and better than buying bees by the pound.

In advocating this scheme, it only applies to localities where there is an early honey-flow and not sufficient bees of proper age to gather the surplus. Localities where bee-keepers depend upon basswood and buckwheat for their crop, they will have no trouble in having their bees in proper condition at the proper time. Toronto, Ont.

An Explanation of the "Rusty Honey."

BY DOUGLAS D. HAMMOND.

On page 54, Dr. Miller asks some of the readers to answer the question concerning the "rusty" combs, referred to in "Questions and Answers."

Well, the second year I was in the bee-business at this place I increased from 11 colonies, spring count, to 26. I got no spring flow to amount to anything, and many were the jokes at my expense as to bee-culture, and still in my locality it is looked upon as a small affair, because they are not posted. But when Aug. 20 came, my bees were changing the programme and working on "blue vervain," as several hundred acres were in a radius of one mile from my bees. Over 2,000 pounds of comb-honey was the result from that and heart's-ease. Blue vervain honey is almost equal to white clover for flavor and color. If we have fairly moist seasons, about every third year we get a good flow from it.

Now, then, to come to the point: "The rusty combs" are from the stain of a pollen from one species of aster, commonly called "frost flower" in Iowa, as it blooms just after the first frost, as a usual thing. They are generally purple with a yellow center, the plant growing about two feet high, and, like the pumpkin or squash family, they yield enormous qualities of pollen, or so much that as the bee leaves the pumpkin vine all covered, so she does from the "aster," mentioned above, and accordingly it covers the comb with the rusty appearance. The bloom is about the size of "batchelor's button." I don't mean the ten-penny wire nail mentioned by E. H. Sturtevant, as a "batchelor button;" but a real bloom, and if ever nature gave us a beautiful bouquet all in one plant, surely this was among the number. I know, Mr. S., for its many a one I've given the girls when the autumn leaves were turning. You were justified, Mr. S., in getting angry at the postmaster for withholding any thing as interesting as the American Bee Journal. What do they suppose us old "baches" will do—sit down and pine our life away? Not much! calico fever is catching; we will just work and wait.

Now, Dr. Miller, I've answered your puzzle. I only wish I should as seldom get puzzled as you do. I'm in about the same latitude you are, and from 150 colonies I got about 1,500 pounds of extracted honey from heart's-ease. That beats your average of—yes, just a taste. Was it "licking good?" and did you want more? Malone, Iowa.

Some Notes and Kinks From California.

BY C. W. DAYTON.

HUMMING-BIRDS AND BEES.—I have a small colony of bees in my study window. These are all the bees near. Several times a day humming-birds notice the flying of the bees and alight on the edge of the alighting-board of the hive. They watch the bees going and returning but do not molest them.

GATHERING RAPIDLY.—Day before yesterday (Jan. 13) the bees were gathering pollen and honey so rapidly as to tumble in heaps before the entrances. In walking amongst the hives the scent of honey was as noticeable as the perfume in an extensive flower garden. But the time for honey-gathering during this month is limited on account of much cloudy weather.

NAILING HIVES.—In nailing hives use common 6-penny nails. Then first make a hole before driving the nails

wherever there is liability of splitting. For the size of nail mentioned use a 3/32 twist drill adjusted in the ordinary brace. A drill will "drop" through a knot, leaving a smooth and perfect hole. This method is especially recommended for nailing dovetails. As hives are nailed up once, and last ten years or more, it ought to pay to do it well.

WATER FOR BEES.—In many places unless we provide water for the bees they will bother the neighbors' water troughs. It is often difficult to get them to work upon the water we arrange for them. Some sweeten the water a little. A little better plan is to keep some wet crushed barley in one side of the water so that the bees can alight and sip the water from amongst the barley.

RAIN MEANS HONEY.—We have already had three times as much rainfall as during the whole winter of 1893-4. It comes slowly, too, so that it soaks into the ground. In Southern California rain means honey. With what we have already received, if we get a rain any time in March, 100 pounds to the hive on the average is sure. Nine-tenths of it will be floated off on the distant markets.

SEEMED LIKE PARALYSIS.—About ten days ago I discovered in three colonies what appeared like the disease paralysis. In one of the colonies nearly every bee was in a Saint-Vitus'-dance condition. Also prostrate and bloated bees were piled out before the entrances. At present the colonies are rapidly recovering, while no remedies have been applied. It looks exactly like the spring dwindling in Iowa or Wisconsin, with their bodies distended with pollen feces. For two or three weeks past the bees had been gathering pollen very rapidly. Then there would come three or four days which would be cloudy and the bees were confined to their hives. Now I wonder if the bees did not consume large quantities of pollen, then remain quietly clustered and become constipated. Had these colonies befouled their hives I should have called it diarrhea.

Some writers have called paralysis constipation. I cannot believe, as yet, that constipation is or is not the cause of paralysis. I do not think that constipation is diarrhea. Constipation seems to be caused by an accumulation of pollen. Diarrhea is the opposite condition, or, want of accumulation. Yet the accumulation causes constipation, and the constipation kills the bees. I think that constipation or diarrhea might wear upon the vitality of the bees as to cause them to die sooner than where they remain healthy. While there were different causes, the death might be ascribed as spring dwindling, which dwindling in fact, was only the result.

Some writers have said that the bee-diseases were varied by localities and environments, and it begins to seem like it. My bees have had paralysis in other years but never as early as this attack this year. But I never have known them to gather such quantities of pollen so early, nor rush into brood-rearing so suddenly. The nameless dead-brood disease which was so abundant last year has entirely disappeared. The last I saw of it was in September, and in some colonies where I thought it would be likely to be carried over, the new brood is very healthy.

If what I have seen here lately was a condition of bees which bordered on bee-diarrhea, then I am inclined to believe that the diarrhea caused by the consumption of pollen in the vicinity of Dowagiac, Mich., is considerably different from the kind of bee-diarrhea which I was acquainted with in Iowa or Wisconsin. Florence, Calif., Jan. 15.

Some Dovetails and Other "Tales."

BY E. S. MILES.

On page 36, Mr. W. K. Morrison shows us an illustration of a "true dovetail." Then again, on page 51, Mr. Emerson T. Abbott shows us another "true dovetail," and also a "so-called dovetail," which is not a dovetail at all. I was going to say it was, too, but I see Mr. Abbott has Webster on his side, so I think it's no use. But I wish to say this: the so-called dove-tailed joint (mortise and tenon) is, for a bee-hive, just as good as a true dovetailed joint (mortise and tenon, with tenon slightly spread and mortise to correspond.)

Mr. Abbott says the dovetailed (so-called) hive is much harder to nail up square than the halved joint. Now I wish to suggest that perhaps Mr. Abbott's halved corners were cut perfectly square and true, while a good deal of the (so-called) dovetailing is not done as nicely as it might be. I have nailed up quite a few dovetailed hives (so-called), and the first ones were the first hives I ever saw. I was anxious to see how they looked, so I nailed some up as quickly as I could, without thinking of a square at all—just driving them tight as they were cut, and nailing. Afterwards, I became more particular, and, used a square, and had them square before driving the last nails. Now I have used them three years, and I have never yet found a hive or super of the last setting up that wouldn't fit those first set up, just as well as any.

Of course, if the dovetailing is so poorly done that the tenons will not go into the mortises without splitting the board, why, we don't want 'em at all. But how much better would halved joints go together if they were only half made? I am writing for beginners, and I almost wish it were permissible in a bee-paper to name some people who do good work, and send only pure queens, and also some that don't. But of course that wouldn't do—"many men of many minds," you know; what I would consider good work, another might not, and *vice versa*.

It beats me, though, that Mr. Abbott doesn't like Hoffman frames, and yet sticks to the beveled-edged hive! "If I were going to stick to as big a nuisance as Hoffman frames *are for this locality*, I believe I'd want another nuisance to match it." I'll have to say *vice versa* to this, too.

HONEY CROP FOR 1895.

If the dry fall theory is correct, western Iowa won't have any honey this year, either, for the fall of 1894 was as dry as it could well be. The ground was dry and dusty up to Jan. 25; since then we have had a light snow. There is a saying, "It is the unexpected that happens." I'm in hopes we will get in on that ticket.

Denison, Iowa, Jan. 26.

Golden Italians—Bees Moving Eggs.

BY A. W. SWAN.

There has been a good deal said about the golden Italians, or the 5-banded Italians. As I have a few colonies of the golden Italian bees, I will say right here that they outstrip anything in this part of the country.

Having 38 colonies of bees in good condition in the spring of 1894, I concluded to try an experiment, getting them all in about the same condition and strength. The spring being very backward, I had to feed some sugar syrup every day for three weeks. The golden Italians that I speak of I bought in July, 1891, of a bee-keeper at Red Oak, Iowa. The winter of 1891 and 1892 I lost all but one queen and a few bees, and they were in very poor condition. But with care I got them built up ready for the honey-flow, and the queen proved to be an excellent breeder. I bought her for an untested queen, and she turned out to be as good as any tested queen I ever saw. Her bees are good honey-gatherers, and easy to handle. I have reared a number of queens from her, which proved to be as good. I have the old queen in a 10-frame hive—nine frames of worker-comb and one frame of drone-comb. She filled the combs completely of brood, last season, and kept it full until September, and did not swarm nor show any signs of swarming. When I saw they would not swarm (it being very late in June) I put on the upper story of 10 Hoffman frames filled with full sheets of foundation, and the bees went to work drawing out the combs in less than an hour after I had given them more room. They filled the 10 frames chock-full of honey, and had plenty in the lower story to winter on.

The dark Italians scarcely made a living in the same yard, and in the same condition. They hung out in great bunches on the outside of the hives every day, while the golden Italians were busy rolling in the honey. So with the experience that I have with dark and yellow bees, I prefer the golden Italians, or the 5-banded bees, as some call them.

BEES MOVE EGGS WHEN THEY WISH.

I have a little experience in regard to this matter of bees moving eggs. During the summer of 1892 I came nearly losing a colony of bees, the queen turning out to be a drone-layer, but I found it out before it was too late, there being about a quart of bees left, and the worthless queen, which was a very little larger than a worker-bee. I killed her at once, and put in about three quarts of bees from another colony that had them to spare, and let them alone two days, when I examined them and found they were building queen-cells over drone-brood, so I removed all the drone-brood and gave them empty combs that did not have any eggs in. I cut out a hole in one of the combs about three inches square, and fitted into it a piece of comb with eggs in every cell, and closed the hive.

In three days I opened it, and found queen-cells built just above the piece of comb fitted in on the large comb, and each

cell evidently had an egg placed in it by the bees, as there was not an egg in the hive except in the small piece of comb mentioned above. There was a larva in each cell, and the eggs were gone from the piece of comb.

Wondering what they did with all the eggs, I examined a little closer, and found there was larvæ in the cells above the queen-cells. Being satisfied, I closed the hive again.

Then in eight days I opened the hive, and found the queen-cells sealed over, and in 12 days I found the few cells of worker-brood sealed over. Finding things all right I closed the hive again, and waited for further development. On the 16th day I opened the hive again, and found the queen-cells partly torn down, and looking further I found a beautiful young queen. I closed the hive again, and waited eight days longer, then opened it and found that my queen had mated, and had filled two combs nearly full of eggs. She proved to be as good a queen as I would wish for. So this settles the question in my mind, that bees will move eggs to suit themselves. Centralia, Kans., Jan. 22.

The Sunny Southland.

CONDUCTED BY

MRS. JENNIE ATCHLEY, BEEVILLE, TEX.

"Sunny" Southland Not So Sunny.

We are just now undergoing one of the worst spells of weather we have ever known in this country. The snow is more than a foot deep where it has drifted and nearly three inches deep on a level, and still snowing. I look out of my window and see families of poor Mexicans tramping around in the snow, looking as though they were almost frozen to death. Willie is just now taking some of them into the factory building to keep them from suffering so much—men, women and children. Such weather as this, counts the same to us, as 40 degrees below zero in Illinois, or that is the estimate we place upon it, as we are not prepared for it. It has been cold for ten days, and no signs of getting better yet.

This means a good honey year with us, as we already had a good season in the ground, and this snow will make a season that will last all summer. The temperature now, at 10 a. m., is 29° above zero, and a regular blizzard sweeping over, and the snow flying so fast and so thick that one is blinded when out. I see my snow-covered bee-hives, and the birds trying to shelter behind them, and I tell you it seems as if we were in the frozen regions of the North. The piping that carries water to our factory is frozen and bursted, and we cannot run to-day.

Do you suppose the earth has frozen on its axis, and turned only half way round and left us near the north pole? I suppose Dr. Miller is in the South to-day and we in the North. Joking aside, we have the roughest weather in the history of this country, and thousands of stock as well as people are suffering.

Beeville, Tex., Feb. 14. JENNIE ATCHLEY.

Report of the Southwest Texas Bee-Convention.

BY F. A. LOCKHART, SEC.

(Continued from page 118.)

EIGHT OR TEN FRAME HIVES—WHICH?

Question No. 9.—Which is best for either comb or extracted honey, an 8 or a 10 frame Langstroth or Simplicity hive?

Dr. Marshall—I began with a 10-frame hive, but I am now satisfied that an 8-frame is best for the South, both for comb or extracted honey.

Mr. Lord—I think locality has something to do with this question.

Mr. Victor—I don't know that I ought to have any say on this question, as I have never used 8-frame hives, and as I find I have to use my 10-frame ones three stories high to accommodate my bees, the 8-frame would have to be higher.

Mr. Flornoy—I think a 10-frame hive is best for beginners, especially as they are liable to take honey too close anyway, and a 10-frame hive will allow the bees a better show, as a little honey in each frame will likely take them through all right. My best success is with 10-frame hives.

Mr. Theilmann—I do not think this hive question is of much importance, for I think either will do, and it should be remembered that it is the bees, with the bee-keeper, that obtain the honey.

THE USE OF SHALLOW FRAMES.

Question No. 10.—Is the use of a shallow frame advisable?

Dr. Marshall—I suppose I have more experience along this line than any one present. I began with 7 inch frames, and got more honey from them, as the bees will go above sooner. I tested it one year, and tried one yard with Langstroth frames, regular size, and the 7-inch frames, and got more honey from the shallow frames. If I were going to start anew, I would use a frame 6 inches in depth, otherwise a Langstroth frame.

Mr. Theilmann—Do your bees have sufficient stores for winter on these shallow frames?

Dr. Marshall—We do not need very much honey to winter bees here, as I left my bees storing honey fast a week ago, and a 6-inch frame, with 10 to the hive, will be sufficient.

Mr. Theilmann—Do you always have honey coming in here?

Dr. Marshall—Not all seasons. Willow blooms in February, then maple, fruit trees, ratan, and basswood till June. We have at Marshall the wild malaga vine, which is good in May. Then field peas, and in the fall we have honey-dew—dark, but good honey—to eat.

One year my bees gathered great quantities of this honey-dew, and it was excellent dark honey. I think this flow was caused by a long drouth during summer; then in the fall we had a good rain, and vegetation sprang up quickly, full of sap.

WHAT ABOUT THE SIZE OF SECTIONS?

Question No. 11.—Is it advisable to use any other section aside from the regular 4¼x4¼, or standard size?

Dr. Marshall—The bees will store more honey in two-pound sections. A section weighing two pounds will bring in our market almost as much as two one-pounds.

Mr. Lockhart—The reguar 4¼x4¼, or one-pound, is best for my locality (Lake George, N. Y.)

Mr. Graham—The standard one-pound, always.

Mr. Theilmann—Taking it all into consideration, I will say a one-pound section, as the bees will finish up such sections soon, so it will be nicer and sell better.

Dr. Marshall—I find that the bees will store almost as many two-pound boxes as they will one-pound. The bees must have a certain degree of heat to build comb and store honey, and the one-pound sections do not afford room for a sufficient amount of bees to cluster together to get up the proper degree of heat, and time is lost. I do not use separators for two-pound sections, either—only a starter about half an inch wide, and it leaves no fishbone in the honey.

Mr. Lockhart—We have to use separators in my country, and must produce the very nicest and straight honey, to obtain the best prices.

DR. MILLER AND THE HIVE-QUESTION.

Question No. 12.—Can any one tell whether Dr. Miller is off the fence yet?

Dr. Marshall—I will use one of his common words, and say, "I don't know."

Mr. Lockhart—If it is barbed-wire fence, I should say yes.

Mrs. Atchley—If it is as much colder, according to locality, in his place as it is here to-day, I should think he was off.

INTERESTING PEOPLE IN BEE-KEEPING.

Question No. 13.—Can any one tell the best way to get people interested in bee-keeping?

Mr. Graham—Hold bee-meetings.

Mr. Victor—Let them know there is a dollar in it.

Mr. Lockhart—I second Mr. Victor's opinion.

Mr. Flornoy—Make the business a success yourself, and all your neighbors will want bees.

Dr. Marshall—Judge Andrews used to advise this: Get your neighbors to come to your yard and show them all through the hives, and everything pertaining to them and the bees.

Mrs. Atchley—I think it unwise to try to induce your neighbor to embark in the bee-business, as he will take hold himself if he is going to be a *bee-man*; if not, he will be an injury to you and himself, as the honey he produces will injure the market; also the range will be overstocked soon.

Mr. Flornoy—I have been hurt in that very way, by ignorant people (I mean ignorant about bees) ruining my market.

Mr. Theilmann—I have talked to my neighbors on this same thing, and it does no good. Besides, I have to move my bees from my own pasture to make them pay, as the pasture

is too meagre for my bees and my neighbor's; still, he does nothing with honey-producing. But as you have so much room here, I do not think your locations will be overdone for many years, and bee-keepers can locate here every five or six miles, and there be no conflict.

Mr. Lockhart—Our people at my location (N. Y.) seem selfish, and bee-pasture is becoming precious. I would not induce people to keep bees that did not love the business, as they will injure you.

BUY BEES OR DIVIDE FOR INCREASE—WHICH?

Question No. 14.—Not having bees enough to occupy my time, will it be best to buy more in improved hives at $5.00 per colony, or feed sugar at 25 pounds for a dollar to stimulate and divide as soon as colonies are strong enough? Or can I divide them here in the coast conntry and build them up in time to catch the first honey-flow—April 1?

Mr. Victor—I would say feed and increase. But there is danger of dividing too soon.

Mr. Theilmann—I do not believe in stimulative feeding. I have tried it in Minnesota, and lost heavily by it. In my locality it won't do, as the bees seem to know best when to rear brood, and I will not hereafter start my bees too soon. When I do have to feed, I use the best brown sugar, as the vegetable properties seem to be taken out of granulated sugar, and this is what the bees most need.

Mr. Lord—I use sugar as artificial means to stimulate.

Mr. Theilmann—Well, I think the more we stimulate the more we lose, especially if done too soon.

Mrs. Atchley—It will be owing to the season, whether bees can be divided and built up by April. But if I had as many as 50 colonies to stimulate, I would increase by feeding and dividing in preference to buying at $5.00 per colony.

SOMETHING TO GO WITH BEE-KEEPING.

Question No. 15.—What can a beginner do to make a support till his bees justify his whole time?

Mr. Lockhart—Teach school.

Mr. Victor—Stick to his old forte that he has made a living at, until his bees pay him to attend to them with his whole time.

Dr. Marshall—Suppose a man leaves his old home and comes here and has to also leave his business, then what shall he do?

Mrs. Atchley—Take hold of whatever he may find to do.

Mr. Hanna—Poultry will be a good side-issue, if we can get rid of the "third-party fleas."

[To be continued.]

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Turning the Hives Around in Winter.

I winter my bees on the summer stands, packed in chaff on the east, west and north, but open on the south. They seem to be clustered at the front and near the top. How would it be to turn the hive around, the bottom-board being loose, and plenty of honey in the back end. J. P.

ANSWER.—I think I'd prefer to leave them just as they are.

Dead Bees On the Cellar-Bottom.

The bees in my cellar come out of the hives, fall on the ground and die, and then it makes it unpleasant to step on them and get the soles of my shoes daubed with their mashed corpses. Is there any objection to fastening them in the hive by means of wire cloth that will keep the bees in the hive and still allow plenty of ventilation? TIDINESS.

ANSWER.—I should say there is objection, very decidedly. In the first place, when you shut in the hive a bee that wants to get out to die, that bee doesn't quietly crawl down on the floor-board and die in a good-natured way. It goes fussing around, raising a rumpus among the other bees that would otherwise be quietly dozing away, and when there's enough of that sort of thing, other bees will become so uneasy they'll get diseased and conclude they want to die, and thus the thing grows. When a bee is ready to die, it's much better for it to be allowed to leave the hive.

As to the matter of cleanliness, it may not be very pleasant for you to be tramping around on dead bees, but really it isn't necessary for you to take a daily promenade in your bee-cellar, and if you must do so there's no law against your sweeping the floor. During the first part of the winter very few bees come out on the ground, and it may not be necessary to sweep it for some time, but afterward it is well to sweep up the dead bees perhaps once in two weeks.

It may be a question whether you are to consider more your own comfort or that of the bees. Taking it from the bees' standpoint, they might say to you: "It's all very well for you to complain of our corpses on the floor, but if you had a big family, and a number of them were dead, would you prefer to have their dead bodies left to decay in the house, or would you rather have them out in the yard? Perhaps you'll say you wouldn't have either, that you'd bury them decently. Well, there's no reason why you shouldn't take us out to a decent burial."

I think you will see that a putrid mass of dead bees in a hive is much worse than on a cellar-bottom. So don't think of fastening in your bees.

Roaches in the Hives.

I would like to know if roaches do any harm when they are in the bee-hives. If so, how should one get rid of them? M. E. P.

ANSWER.—I don't think they ever do any particular harm to the bees.

Feeding Bees in a Greenhouse.

Could I feed a colony of bees in a greenhouse with wire-cloth over the top and entrance, to advantage? Do you know of any one having tried it? I have a chance to feed a weak colony in that way. H. S. J.

ANSWER.—Look here. You'd better let that thing alone entirely. It's been tried by different ones, but I never heard of its being a success.

Feeding at the Entrance to Stimulate Bees.

I have 60 colonies of bees that I have in 8-frame dovetailed hives with outside winter-cases, with cloth, 3 thicknesses of newspaper, with a hole as large as my hand torn out, and chaff cushion overlaying all. Now, I wish to stimulate them by feeding in the spring at the entrance, without "fanning the cover" over them, as I believe it would do as much harm as the feed would do good. What is the best way to do it? J. A. M.

ANSWER.—There's an entrance-feeder made of tin, on the atmospheric principle, that's a good entrance feeder, but I can't recall whose it is. With that you're safe to give the feed day or night without danger of robbers getting at it from the outside. If your hive-bottoms are tight, you can tip back your hive, and pour the feed directly into the hive at the entrance, but you must do it at night.

Feeding in the Spring for Increase.

I have kept bees since 1879, but in all these years of bee-keeping I haven't fed 5 pounds of syrup or honey. What I am driving at is this: I want to increase next spring as much as possible, and will have to feed pretty lively, as we do not have many early flowers here. I expect to feed granulated sugar, and want to know what is the best way to prepare it before putting in the hives? From what you and others say in the bee-papers, to use a percolator is the best. How would one work made as follows? Take a 30-gallon barrel with one head in; bore it full of ⅝-inch holes, then put in (how many?) thicknesses of flannel, set the barrel over a hopper-like receiving-vessel with gate below. Please tell me if it would work all right?

We do not get as big yields here as others do, but hardly ever have an entire failure. If the Indians allot their land it will be a big help to the bee-keepers here along the line. As it is, it is all prairie, and not much account for bee-pasture. I am only three miles in the State, but will locate farther in

from the line. The Territory will be a grand place for bee-keeping when it is "broken out," and, besides that, it will break up the gang of out-laws which give us so much trouble.
Edna, Kans., Jan. 23. W. E. P.

ANSWER.—The plan you propose, with perhaps half a dozen thicknesses of flannel will work all right. The greatest likelihood of trouble with your percolator will be that you may not get the flannel fit down tight on the wood, and the water will work a channel through the sugar to such a place, and run through without taking its proper quota of sugar with it.

But I wouldn't make any percolator at all. That's a thing of the past. Set an empty hive-body over your hive of bees, the frames being covered over with only a small hole for the bees to get up into the empty hive. Fill a tumbler two-thirds full of sugar, more or less, then fill it up with water, lay over it a single thickness of flannel, or two thicknesses of cotton-cloth, put a saucer or a plate over this, then holding one hand on top the plate, and the other under the tumbler, quickly turn the whole thing upside down and set it in your empty upper hive and cover bee-tight. It may be necessary to daub a little syrup from the hole to the feed to get them started. That's easier than getting syrup ready, and it's just as good if not better. If you want to feed a larger quantity you can take a gallon crock.

A Question on Best Management.

I wish to increase 30 colonies to 60, and get as much extracted honey as possible. Which is best to work, half of them for honey and the rest for increase, or divide them all? My surplus honey is principally from heart's-ease.
Shelton, Nebr. A. W. S.

ANSWER.—I believe I'd work all alike, especially as your chief harvest is late.

He Wants a Successful Self-Hiver.

I have some colonies in box-hives, and do not want to transfer them this year. In swarming time I want them to swarm naturally. I have no time to watch them as the swarms issue. What is the best practical automatic swarm-hiver or self-hiver now in use? TENN.

ANSWER.—I don't know. The swarm-hiver business is yet in the raw, many having machines that they think will be successful, but I don't know that any one as yet has anything that will hive a swarm as satisfactorily every time as you can hive them yourself.

Transferring and Swarming.

I have two colonies in box-hives, which I expect to transfer to chaff hives next spring, on a full set of wired frames of foundation. They are strong colonies. I am living in a section where are black locust, poplar, basswood, white clover and Alsike clover, besides other wild flowers.

Will the bees cast a good swarm by stimulating them on granulated sugar syrup, after being transferred? Or had I better not let them swarm? I have been keeping bees for five years, and had no opportunity to transfer. I have had pretty fair success.
Koch, O. A. M. S.

ANSWER.—You will hardly transfer until honey is yielding, and putting them on empty frames of foundation can hardly be called transferring. Very likely they may not think of swarming at all, and unless you are quite anxious for increase you will be better off if they do not swarm. Feeding syrup will not make much difference in the matter, unless there comes a time when for several days they can gather nothing outside, when feeding would keep up brood-rearing.

Bee-Keeping in New Mexico—May be Golden-Rod.

I bought 10 colonies about a year ago, and last season I got 840 pounds of honey in one-pound sections, which I sold for $136.40, and I have 28 colonies at present. My bees were in the 8-frame dovetailed hive, one super to the colony, with flat covers painted on both sides, and I would not give it for the gable cover for my use. Swarms come out as late as Sept. 9, and fill the hive.

We have a yellow flower that blooms late, and yields lots of honey. If Dr. Miller had it growing where he lives it would be worth $100 a year to him. It grows in the driest of years—the drier the better. I will mail him some of the seeds. In a few years he will not have to feed $75 worth of sugar to carry his bees through the winter. E. S.
Eddy, N. Mex., Jan. 28.

ANSWER.—I wonder if the yellow flower mentioned is not golden-rod. It is highly lauded by some, while in other localities it seems to be worthless.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Mark this.—"Quietness is the essential quality for safe wintering, for with it always comes the least consumption of stores, and with a minimum consumption of stores comes the least possible exhausted vitality and the greatest longevity during the spring and early summer days."—Doolittle.

Here is food for a good deal of thought, as it tells in a few lines what one might take pages to write on the "winter problem." To prevent "exhausted vitality" is everything to the bee-keeper. When it is remembered that bees *wear* themselves out and do not die of disease, in most cases, it will be seen how important it is to stop this wear as far as possible during the winter, when we expect the workers to live five or six months instead of that many weeks, as they do when actually engaged in gathering honey. I have long insisted that any method of feeding which makes it necessary to disturb the bees during cold weather is a mistake, and a serious one, too. Here is something along this same line from Henry Alley, put in his blunt and rugged way:

"Should we find any one in our apiary on a cold day disturbing our bees, there would be a racket at once. Nothing could make us so near wild as such a thing as that. We hardly ever go about the hives at all in winter, fearing that by merely stepping about the stands we might disturb the bees. A colony of bees well supplied with food has no trouble in caring for itself."

Not About Bees.—"Some people do not seem to be able to comprehend the fact that almost all kinds of work nowadays require *careful, thoughtful, earnest* attention. The men who get good pay, who are making great strides in their profession, concentrate all their energies—all their attention and thought—on the work in question."—A. I. Root, in Gleanings.

Here is a real gem set in the finest of mounting, and it is refreshing to find such in this age when many men spend more time whining about the poor pay they get than they do in thinking about how to do the work well they have in hand. I hardly think Friend Root knew what a gem he was setting before his readers when he uttered these words. Just think of it! "*Careful, thoughtful, earnest* attention!" How many of us are giving this to the work we have in hand? Oh, if this could only be printed in large letters and hung up in every apiary, every shop and factory, in every store, on every farm, and in every kitchen—nay, more, in every place where human hands and brains are striving to get for themselves an honest living—what a grand monitor it would be! A careful, thoughtful, earnest bee-keeper; a careful, thoughtful, earnest farmer; a careful, thoughtful, earnest doctor, preacher, lawyer, clerk, daily laborer, or housewife, giving close attention to all details—surely they *must succeed*, and not be long in want of *something* to do. But, *alas* for human weakness! No wonder that Bro. Root said he was tempted to say sometimes, "Oh, why is it that God made so many worth so little, and only a few worth so much?" But, then, as he says, God did *not* make us so. We *made ourselves* that way. Think again—*careful, thoughtful, earnest*—are you?

Please Remember that I am *not* a dealer in bee-keepers' supplies, so do not send to me for a catalogue, etc. Just write to those who advertise in the Bee Journal, for anything you may desire in that line, and they will be pleased to supply your wants.

But there's something you *can send* to me, and that is your subscription to the Bee Journal for one or more years, if not already paid in advance. Suppose you look at the wrapper-label on your next copy of the Bee Journal, and see how your subscription account stands. If it is in arrears, please send on enough to put it—well, say to Jan. 1, 1896, any way. That will surely make at least two people happy—*your*self and *my*self. Please "try it on."—ED.

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GEORGE W. YORK,
EDITOR.
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DR. C. C. MILLER	"QUESTIONS AND ANSWERS."
MRS. JENNIE ATCHLEY	"THE SUNNY SOUTHLAND."
"GLEANER"	"AMONG THE BEE-PAPERS."
"BEE-MASTER"	"CANADIAN BEEDOM."
DR. F. L. PEIRO	"DOCTOR'S HINTS."
REV. EMERSON T. ABBOTT	"NOTES AND COMMENTS."

Vol. XXXV. CHICAGO, ILL., FEB. 28, 1895. No. 9.

Editorial Budget.

The Annual Report of the Nebraska State Bee-Keepers' Association for 1894, is on my desk. It was gotten up by Mr. L. D. Stilson, editor of the Nebraska Bee-Keeper, and Secretary of the Association, and is a credit to the bee-keepers of that State. When you get ahead of those Nebraska bee-folks, you'll have to rise pretty early. They are hustlers! I think they are getting ready to "show off" in 1896, when the North American convention comes to look in on them. They know how to do it, too.

Mr. John H. Martin—the "Rambler" of Gleanings—has sent us a condensed report of the recent meeting of the California State Bee-Keepers' Association, of which he is the efficient Secretary. The report will be published as soon as there is room for it in these columns.

Accompanying the report, was a letter dated Feb. 1, at Bloomington, Calif., in which Mr. Martin says: "The gentle rain is falling again, and the prospects are bright for a good honey season." I hope those "prospects" will be followed by the largest and sweetest honey crop California has ever had.

The National Bee-Keepers' Union.—General Manager Newman has sent out the following report, giving the result of the recent election of officers for the ensuing year:

OFFICAL CANVASS OF VOTES.

To Members of the National Bee-Keepers' Union:—

The canvass of all the votes received, up to the time of closing the polls, on Feb. 1, 1895, shows that 151 ballots were recorded, as follows:

FOR PRESIDENT—Hon. R. L. Taylor, 126; Dr. C. C. Miller, 5; G. M. Doolittle, 4; Hon. Eugene Secor, 3; A. I. Root, 2; Scattering and blanks, 11. Total, 151.

FOR VICE-PRESIDENTS—Dr. C. C. Miller, 114; G. M. Doolittle, 113; Prof. A. J. Cook, 102; A. I. Root, 101; G. W. Demaree, 77; Hon. Eugene Secor, 38; C. P. Dadant, 31; C. F. Muth, 22; P. H. Elwood, 16; G. W. Brodbeck, 14; G. W. York, 11; E. R. Root, 7; Hon. R. L. Taylor, 7; Mrs. Jennie Atchley, 6; James Heddon, 6; W. Z. Hutchinson, 4; S. I. Freeborn, 3; R. F. Holtermann, 3; Frank Benton, 2; C. W. Dayton, 2; H. G. Acklin, 2; Scattering, 17.

FOR GENERAL MANAGER, SECRETARY AND TREASURER—Thomas G. Newman, 149; Blank, 2. Total, 151.

Although several have expressed their desire for a change in the officers, the members have decided to keep the management in the same hands for another year.

Mr. G. W. Demaree, who has served as Vice-President for 10 years, now states both publicly and privately that he *positively declines to act* on the "advisory board" for the coming year—as he desires a change in the "official board." This will elect Hon. Eugene Secor, who has received the next highest number of votes. We welcome Friend Secor most heartily, because of his eminent ability, influence and sound judgment. This is a place where the latter is a very necessary qualification, and the sagacity of the Board is sometimes quite severely tested.

Several more decisions from Supreme Courts are needed as precedents, for the guidance of judges in lower courts, and one of these, I hope, is about to be obtained, covering a very important point.

The treasury being in a satisfactory condition, the Union is fortunately in a position to *demand justice*, and protect the rights of its members in the courts of law. This is a place where "money counts." If the Union was a bankrupt concern, quite powerless to "help in time of need," its influence would be infinitesimal, and itself a laughing-stock for all. The "sinews of war" makes all the difference in the world.

THOMAS G. NEWMAN, *General Manager.*
Chicago, Ill. Feb. 2, 1895.

Honey-Salve, an exchange says, for boils and other diseases of a similar character, is made by thoroughly incorporating flour with honey until of a proper consistency to spread on cloth. Applied over the boil it hastens suppuration, and the early termination of the painful lesion.

The American Bee-Keeper for February came out with double the number of pages, having added what it calls a "literary department." It admits that "in former issues" it "found considerable fault" with other bee-papers that had taken on side-issues in the way of "running in matter foreign" to bee-keeping. Well, Bro. American, I don't believe you'll always make up half of your paper of "stereotyped plate-matter." But mind you, *I* don't object to it at all.

Mr. A. I. Root is now in Florida with one of his daughters, and is writing up his trip for Gleanings. Mr. Selser's interesting article on Florida, on page 67 of the Bee Journal, will be followed by others just as soon as there is room for them in these columns. I have them in the office now, but some other contributions were in ahead of them. I may say here that I trust no one will worry, or become impatient, if his or her article or letter is not published in the Bee Journal the next week after I receive it. Such a thing is quite impossible usually, and particularly at this season of the year.

Mr. J. C. Wallenmeyer, of Evansville, Ind., the author of the pretty song, "Queenie Jeanette," gave me a pleasant call on Feb. 15, while in Chicago on business. Mr. W. is an energetic and affable young bee-keeper, having done exceedingly well the past year with his bees. His picture, as well as Queenie Jeanette's, is on the engraved cover of his new song. Price of the song is 40 cents, postpaid; or I can send it to you with the American Bee Journal for one year—both for $1.20. But you can get it free as a premium for sending one new yearly subscriber to the Bee Journal, with $1.00.

A New Honey-Plant.—Mr. Adolf Theiss, of Darmstadt, Hessia, has introduced a new creeper bearing eatable fruit. The plant is called *Actinidia polygama* or *arguta*, originating in the Amur District. This hardy plant will climb very high and wind spontaneously. Its leaves are about the size of those of elm-trees, only longer; its blossoms are small and rich in honey; its fruits, growing in long bunches of a fine green color, and having the size of gooseberries, taste sweet, and have the smell of pine-apples. The plant requires a thick layer of vegetable soil, and has to be watered in lasting drouth during summer, but, in all other respects, needs no attendance whatever.

Dr. E. Gallup and Hon. J. M. Hambaugh "surprised" the California State bee-convention Feb. 5, by being in attendance. Mr. Geo. W. Brodbeck, a vice-president of the association, wrote to me thus about it:

Two genuine surprises came to us during the late session of our State bee-association at Los Angeles. The first, in having present that whole-souled Mr. Hambaugh, of Illinois—in whom any section can take just pride; and the second, the presence of that invincible California bee-expounder—Dr. E. Gallup.

We are having another rain treat, and with some additional

moisture later in the season, I feel disposed to speculate on a good honey season; *but* in California, as elsewhere, we can tell better later on. GEO. W. BRODBECK.

Good for Mr. Hambaugh and Dr. Gallnp! Mr. Alpaugh, of Canada, was there also. All three were made honorary members of the Association. Surely, a grand meeting it must have been, with them and Prof. Cook, Messrs. Rambler, Brodbeck, etc., in attendance. But just wait till you hear from Toronto! Those Canadian bee-folks are "something great" on conventions, I hear.

Kind Testimonials—and lots of them—still keep coming from the host of friends of the old American Bee Journal. I often wish I could print every one of them, but it would take up too much room, and you wouldn't like that, especially when I have so much excellent matter waiting its turn now. Of course it is very encouraging to me to know that my efforts are being appreciated by those who subscribe for the Bee Journal, and I want to again thank you all for your many kind expressions.

By the way, I have a lot of "good things" in store for you, which will appear as fast as possible. In the meantime, just get your brother bee-keepers to subscribe for the Bee Journal, and then they, too, can enjoy reading it. A great many have already sent in the names and money of new subscribers, but there is room for a whole lot more. If I had twice the present number of good, paying subscribers, I could give you—well, certainly a 50 per cent. better bee-paper, and *not cost you a cent more* than it does now. Why not you help to double the list, and thus help yourself as well as your friends? Many have done nobly in sending in new subscribers in the past, but I believe that much more can be done if a little more effort is put forth by all. Try it and see. Send for free sample copies, and then start out, won't you?

Mr. S I. Freeborn.

As promised last week, I now give a picture (see first page) and sketch of Mr. S. I. Freeborn, who died at Richland Center, Wis., Feb. 5, 1895. He was one of the corps of experts who answer the queries found in the "Question-Box" of the American Bee Journal each week, and in that department his sound judgment and wise counsel will be greatly missed.

In the American Bee Journal for Dec. 14, 1893, in connection with the portrait given, was printed this sketch of Mr. Freeborn's career, which will at this time be read with a new interest and profit:

Among the early pioneers of Wisconsin was Samuel Irwin Freeborn, then only 14 years of age. His father having been dead some four years, he was early thrown on his own resources, and right well did he improve them, for he soon learned to handle a canoe or rifle equal to any Indian with whom he could then test his skill, for Indians were quite common in those days.

Hunting deer and bear was his especial delight, and not until the advance of civilization made game scarce did he give up his annual deer hunt.

Mr. Freeborn is also one of the pioneers in bee-keeping. He kept as high as 230 colonies in box-hives before the advent of frame hives, and he made a success of it, even then having sold $600 worth of honey in one season.

Hearing of the merits of a frame hive, he adopted the Gallup, and increased his bees until he is to-day one of the largest bee-keepers in the State, keeping from 200 to 400 colonies spring count. While he has a good many Langstroth hives, it is a hard job to convince him that any other hive has as many good points as the Gallup.

Well do I remember the first extractor he had, and what a sensation the first 10,000 pounds of honey made. All his neighbors wanted bees, and many did get them, but now I know of but one bee-keeper within four miles of Mr. Freeborn's old place. His largest crop of honey was 45,000 pounds of extracted in one year.

He fully believes in overstocking, and has always run his bees in several different yards, 200 colonies being about the largest number he has found profitable to keep in one yard, and this in the best location, with plenty of basswood, clover, and buckwheat in easy reach.

While Mr. Freeborn is not much of a hand to write for publication, he has always been "there" when it came time to harvest the honey crop.

Winter losses have been the great drawback with him, and many are the experiments he has tried to circumvent this trouble. While the greater number of experiments would be successful for a few years, he has had to fall back on cellaring as the best. But he rather prefers a special arrangement, like a cave dug in a convenient bank.

Once he thought he had a sure thing for wintering, by making small houses over about 20 colonies set close together, and packed in chaff. In mild winters they were all right, but when a real "killer" came along they were absent at spring "roll call."

Besides his bee-business, Mr. Freeborn owns three farms, and is one of the largest fruit-growers in the State of Wisconsin, being an extensive grower of apples, grapes and all kinds of small fruit. He is an enthusiast on fruit-growing, and has the largest variety of apples, of named kinds, of any one in the West, to say nothing of an endless number of seedlings of his own growing. He was at one time extensively engaged in the nursery business, under the firm name of Freeborn & Hatch, but he is now about out of that line of business.

Having obtained a competency by industry and economy, he has built himself a fine residence in the pleasant young city of Richland Center, where he expects to spend the remaining days allotted to him, in peace and quiet; although not having as yet retired from the active management of his varied business interests.

The subject of this sketch was born in Hartland, Niagara Co., N. Y. about 60 years ago, and has been twice married, his first wife being Miss Elvira Howe, of Stanstead, Canada. Three children were born during her life, two sons and one daughter. His present wife was Miss Hadassah Spyker, of Ithaca, Wis., and two children have been born to them, a son and daughter.

Mr. Freeborn is a member of the Presbyterian church, and is always wide awake to every interest of the neighborhood, whether it be a social gathering or a political meeting.

Among the Bee-Papers

Conducted by "GLEANER."

SPRAYING DURING BLOOM.

At the Ontario convention, the Review says Mr. Hall told of a neighbor who sprayed his plum trees while in full bloom. His reward was the getting not more than half a dozen plums from his plum orchard, while other neighbors that didn't even spray at all had fair crops of plums.

TO FEED OR NOT TO FEED.

Experimenter Taylor gives as an argument in favor of feeding back, that a colony thus fed has a larger stock of young bees, hence better fitted to go into winter.

Hasty asks in Review: "A prosperous colony whose season closed sharply and finally the middle of July, and which has passed the rest of the season in a sort of summer hibernation, are they not *really* just as hopeful to go into the winter with, as the colony which has been hustling all the fall?"

B. TAYLOR'S STORY IN THE REVIEW.

Very interesting to hear him go back 25 years. Some will be reminded of their own early enthusiasm. He says: "In the year 1863 I produced and sold $65.00 worth of honey from two colonies of bees." Then he figured what he could make the next season with the 75 colonies he had. "There could be no mistake, for there were 75 colonies which at $32.50 each would bring $2437.50 the very first year. I at once decided I would increase my colonies to at least 1,000 and at once build a fine dwelling." But the dwelling didn't come till 15 years later.

Then he tells how the sectional brood-chamber grew out of his experiments years before such a thing was patented.

SOMNAMBULIST'S OPINION.

Here is what Somnambulist, the bright correspondent of Progressive, says:

"Not to take note of the strenuous efforts now being put forth by Bro. York to insure his journal a place in the front ranks, would be to outrage justice. He's rather a small bundle of humanity but the make-up of that bundle—like the big man said of his wife—'She's little, but Oh my!' A brighter, kindlier countenance one seldom greets. And almost if not quite at first glance one cannot fail to discover

that energy and determination to please are principal component parts of his being."

Now, Bro. York, if your hat begins to feel a little tight, just remember Somnambulist is talking in his sleep.

[Say, Gleaner, what Somnambulist said is enough to make a fellow "feel tight" all over. But if I find my hat pressing too much, I'll get one made of rubber.—EDITOR.]

WAX EVAPORATING.

I tried holding a waxed cloth over a steam jet, as directed by Chas. Swindells, on page 94, but the magical disappearance did not take place. Does the slightest particle of wax ever evaporate at 212°? Has he not made some mistake in the whole matter?

TWO BEE-MEN WITH "NOTIONS."

What in the world's the matter with Dr. Miller that he wants to insist that Bro. Abbott should be run in the same mould as every other bee-keeper? He doesn't always stick so close to the beaten track himself that he should make a hullabaloo when some one else varies. Isn't that the very thing a bee-paper is for—to find out one another's notions? We're not bound to adopt them.

SHALLOW VS. DEEP EXTRACTING-COMBS.

That's a new idea to me, and I believe it's a good one, that Dadant gives, that queens are less likely to lay in shallow than deep extracting-combs. But the question is, will it make enough difference so that a queen-excluder is not needed? I had always supposed that the reason queens seldom went up into sections was because of the separators and the width of the sections. Possibly the shallowness has something to do with it. I wish Mr. Dadant would tell us if he uses excluders.

EARLY VS. LATE QUEENS.

On page 85, W. W. Gravlee finds by experiment that queens reared artificially very early in the season are best. The point for strong emphasis in the matter is that the experiment was with a few colonies for a single season, in which case there might be a number of things to account for the difference in results without regard to the character of the queens. As the testimony of many is that queens reared in advance of the swarming season do not come up to the average, and that good queens are reared all through the swarming period, it is hardly worth while to advance anything less than a considerable number of different results obtained through more than a single year. The only point upon which there is much chance for controversy is whether a queen reared after the swarming season can be as good as one reared during that time.

MUSHROOMS AND SPANKING.

I suppose it is dangerous to disagree with a doctor, but I'm not sure that Dr. Peiro's test for mushrooms will work in this "locality." He don't give the color of good ones, but says those covered with pink or red are always poisonous. In this region two colors are common—white, which I have always rejected, and those whose under surfaces are pink, turning to brown and black with age. These latter I have often gathered and eaten with pleasant results. If onions were boiled with them, I'd call them bad, no matter what the color.

Now I'm not going to come in conflict with Dr. Peiro as a medical man, but it seems to me there's something out of whack with his morals on that spanking question. If precedent counts for anything, the spanking should be given to the boy that has run off to go in swimming and come home safe and sound.

Canadian Beedom.

Conducted by "BEE-MASTER."

Who is Bee-Master?

A paragraph in the January Bee-Keepers' Review reads as follows:—

"'Bee-Master' has a department in the American Bee Journal, and flatters himself that no one will discover his identity. Let him not lay that flattering unction to his soul, as anyone at all conversant with his writings in the past will at once recognize the eloquent quill that he drives."

While making his best bow in acknowledgement of the delicate compliment conveyed in the latter part of this clipping, Bee-Master begs to assure the genial editor that he does not lay any such flattering unction to his soul as he is charged with. He knows that men are even more curious than women, if that be possible. He knows, also, that not only, as a certain pious ditty says:

"The painted hypocrites are known
Through the disguise they wear,"

but it is very hard for honest men to hide their personal identity when, for good and sufficient reasons, they wish to do so. But while he may be "suspicioned," Bee-Master does not intend to be discovered. He believes in impersonal editorship, anyhow, and is bound to enjoy the fun of this way of doing it in the present instance. At a masquerade you may think you recognize a party by some peculiarity of form, gait, or manner, but cannot be sure until the masked person lifts his or her visor. So it will be in this case.

Bees are prying little insects, and some bee-keepers are prone to fall into the ways of their "pets," as they call them, but over-inquisitiveness is not a virtue, by any means. When a royal or otherwise distinguished person travels *incog.*, although he or she may be recognized, it is not etiquette to presume to address them by any other name than that by which, for reasons of their own, they have chosen to be known, for the nonce. Mr. Hutchinson is a very smart man, and possessed, no doubt, of great penetration, but he is too polite and well-mannered to intrude into a "*sanctum sanctorum*" over whose door "no admission" has been inscribed.

Stachelhausen.

Mr. E. E. Hasty in his "Condensed View" for January speaks of the aboved-named eminent bee-keeper as follows:—

"Stachelhausen, one of the strongest and best of American writers, and who has been missing somewhat for quite awhile, appears in the September number of the Apiculturist, unless, perchance, that article is a re-publication. We can ill afford to lose such a pen as Stachelhausen's; and whoever knows where he is secreted ought to poke him out.....Stachelhausen thinks it probable that bees do add formic acid (sting poison) to the honey before capping it. Thus he willingly volunteers to take part of the odium and chaff to which Friend W. F. Clarke has been subjected. He also suggests that the same is the natural preventive to foul brood."

Mr. Hasty suggests that formic acid may be a cure for bee-paralysis. It might be well if M. R. L. Taylor would try some experiments along these lines.

Ontario Foul Brood Inspector's Report.

BY WM. M'EVOY.

During 1894 I visited the bee-yards in the counties of Essex, Lambton, Middlesex, Oxford, Brant, Wentworth, Wellington, Halton, Peel, York, Frontenac, Duffern, and Simcoe, and in the cities of Hamilton and Toronto. I examined 125 apiaries, and found foul brood in 39 bee-yards. In two apiaries the disease had not made much headway, while in three it had. The remaining 34 apiaries were very bad with foul brood, and the death-rate among many of these had been very large before I examined any of them.

The condition I so often found things in, in several localities, gave me more to do than any person ever knew of. I found some bee-yards very badly diseased and near fine apiaries, and the owners of these foul-broody apiaries away from their homes looking after other business that they were engaged in. In all such cases I looked around and got a good bee-keeper in the same localities to carry out my method of treatment in these foul-broody apiaries, and make cures without causing loss or trouble to any one. I never saw people so willing to take hold and cure their diseased apiaries after I explained how to do it, as the bee-keepers that I met with in the past season.

I had one very old couple cure 15 foul-broody colonies under the most trying circumstances. This aged couple were in poor health and scarcely able to go around; the weather was very warm and the bees not gathering any honey, and the diseased colonies being near some fine apiaries, I was very much pleased to see the grand cure the old couple had made in such a short time.

In getting foul-broody apiaries cured I have always found that it made a great difference who was going to do the work. Nearly all bee-keepers would cure their fool-broody apiaries

in a short time, and end the season with every colony in grand condition, while some that had only a few colonies would be so careless and indifferent about the curing, and would not do as I told them, and then I resorted to stamping the disease out by fire, for the public good.

The very wet weather that set in all over the Province in the last half of May and forepart of June was a serious thing as it came at a time when the hives were full of bees and brood, and completely stopped all honey-gathering then. With the honey-flow so suddenly shut off, the bees soon used up all the unsealed honey, and then they did not uncap the sealed stores fast enough to keep pace with the very large quantity of larvæ that required so much feeding, the result being a good deal of starved brood, which was left in the cells to decay. Then when the bee-keepers found the starved brood in a decaying state in their colonies, many of them became greatly alarmed and believed that foul brood was breaking out in their apiaries.

Soon after that, I received many letters from bee-keepers in Ontario and the United States, describing a kind of dead brood that the writers found in their colonies, and wanting to know if it was foul brood. In several cases it was starved brood, and in many others it was the genuine foul brood. This confused state of things with the constitution of so many colonies going wrong, made the bee-keepers very anxious to have their apiaries examined. After that, I was wanted in many places; I rushed through every locality as fast as I could, and kept pretty well up with the work. I burned one colony in Oxford county that was almost dead with foul brood, and nine in the county of Halton—four at one apiary and five in another. The owners of both apiaries were very willing that I should destroy the few diseased colonies, and helped me do the burning.

I burned three foul-broody colonies in Wellington county. I was well pleased with the work done by the owners of all other diseased apiaries.

In getting the foul-broody apiaries cured, I always took the greatest of pains to explain to the owners how to manage the business so as to have every colony a good strong one and in fine condition every way when they were cured of the disease.

When I was first appointed Inspector, I made up my mind not to put the names of those whose bees had foul brood, in my Annual Report, but to send them to the Minister of Agriculture, along with a detailed statement of my time, carfare, livery hire, the exact condition I found every apiary in that I examined, and what was done and how I managed the whole business, and succeeded in getting foul-broody apiaries cured by the wholesale, peaceful settlements made, and justice done where diseased colonies had been sold through mistakes, where I burned a few foul-broody colonies, and why I did it.

I knew well that if I was to put the names of those that had foul brood in my annual report, it would hurt the sale of their honey, queens and bees for a long time after their apiaries were cured, and to publish the names could do no person good, while it would be sure to lead to the concealment of the disease. The bee-keepers of every part of the Province that I have ever been in, always gave me credit for the way I managed the whole business.

At the first Board of Directors Meeting held in Lindsay, in January, 1894, it was moved by Mr. John Myers, seconded by Mr. E. A. Jones, and carried, that the Inspector send all the names to the Minister of Agriculture only. All the bee-keepers that I heard speak of this while on my rounds through the Province, were pleased that a resolution had been passed prohibiting any person from getting the names except the Minister of Agriculture.

My time, carfare and livery hire amounted to $662.25.

Woodburn, Ont. Jan. 21. WM. McEVOY.

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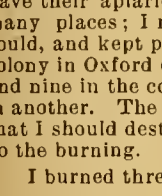

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Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

New or Old Comb for Honey or Brood-Rearing?

Query 960.—1. Do bees prefer new or old comb in which to store honey?

2. Do they prefer new or old comb for brood rearing?—Ky.

B. Taylor—1 and 2. I do not know.

R. L. Taylor—1. No preference. 2. Old comb.

Dr. C. C. Miller—1. Old, always. 2. Old, every time.

Eugene Secor—1 and 2. I never noticed any preference.

E. France—1 and 2. I don't know as they have any choice.

Rev. M. Mahin—1 and 2. They do not seem to have any preference.

Mrs. L. Harrison—1. I do not know as it makes any difference. 2. I don't know.

H. D. Cutting—1 and 2. Bees prefer comb finished, but "how old" is another question.

G. M. Doolittle—1 and 2. I could never see as they gave a preference to either for honey or brood.

J. A. Green—1 and 2. Old, for both purposes, provided it is in as good condition in other respects.

Jas. A. Stone—1 and 2. My experience has been that they use whichever is in the place they wish first to occupy.

Mrs. Jennie Atchley—1. I'm not sure this question is answerable, as bees prefer to store where the combs are kept warm by the cluster, and no preference as far as I can see. 2. I doubt if the

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bees have a preference here, either, but the queen often lays in a new piece of comb when she has plenty old combs near her.

Chas. Dadant & Son—1 and 2. No difference in either case, unless the comb be too old for the queen to lay eggs in it readily.

W. G. Larrabee—1 and 2. If the new combs are drawn out to full length, I do not think they show any preference in either case.

Prof. A. J. Cook—1 and 2.—Bees are not fastidious in either case. They will start queen-cells, however, most readily on bright comb.

Mrs. J. N. Heater—1 and 2. There is no preference in either case, but if you want queen-cells drawn, they will use the new combs sooner.

Dr. J. P. H. Brown—1 and 2. I do not know that they have any choice, only so the comb is sound and clean. These requisites are important factors with them.

C. H. Dibbern—1 and 2. I think bees will accept one about as readily as the other, when there is honey coming in. The same holds true as to brood-rearing.

P. H. Elwood—1. I think the bees have a slight preference for new comb. 2. Comb that has been *once* bred in seems to be preferred to older or younger.

J. E. Pond—1 and 2. I don't find much if any difference so far as the bees go, but for myself I prefer old (if not too old) comb for brood, and new for surplus honey.

Wm. M. Barnum—I hardly believe the bee has any marked choice. I prefer a comb that has had at least one season's use, on account of the *strength* which such use will give it.

Rev. Emerson T. Abbott—1 and 2. I do not know, as I have no means of finding out just what a bee *thinks*. They seem to me to take to the new combs best, but it may be a delusion.

G. W. Demaree—1 and 2. I have never been able to see much difference in the preferences of bees for old or new combs. They always accept the combs I give them, new or old, and I have never detected any difference.

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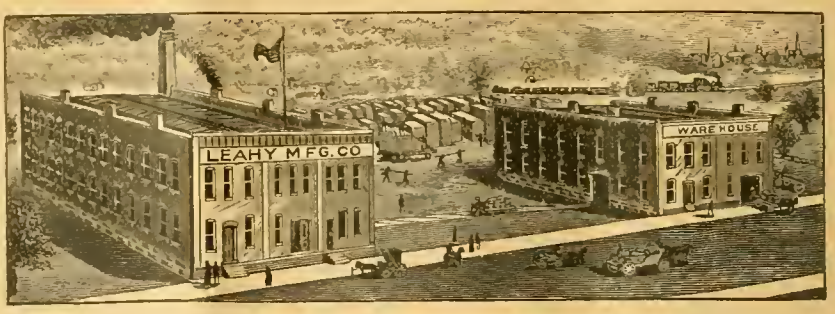

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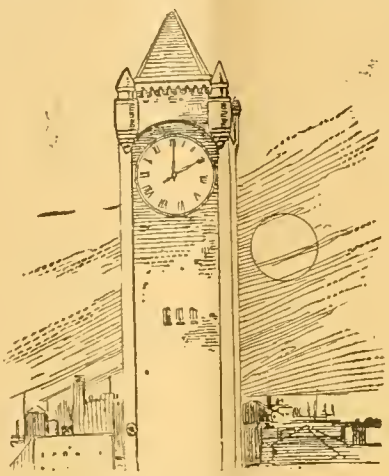

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"I TOLD YOU SO."

MRS. ATCHLEY:—The 19 1-frame Nuclei I bought of you last year with Untested Queens, gave me 785 lbs. of section honey and 175 lbs. of extracted honey, besides some unfinished sections. The best one gave me 120 one-pound sections well filled.
Heber, Utah, Oct. 9, 1894. J. A. SMITH.

Now, didn't I tell you it would pay to ship Bees north to build up and catch the honey-flow? **Bees by the Pound,** on a Comb and Honey to last the trip—$1.00; 10 or more Pounds 90c. per pound. **NUCLEI**—$1.00 per Frame; 10 or more Frames, 90c. each. Untested Queens to go with them [same as Mr. Smith got] 75c. each.

UNTESTED QUEENS—by mail, either **Leather-Colored Italians, 5-Bands,** or **Carniolans**—$1.00 each; $5.00 for 6; $9.00 per Dozen—till June 1st., **then** 75c. each; $4.25 for 6, or $8.00 per Dozen.

TESTED QUEENS—3-Bands, $1.50 each; **5-Bands** and **Carniolans,** $2.50 each. **Fine Breeders,** of either race, or **Imported Queens,** $5.00 each. My **Straight 5-Band Breeders,** $10.00 each.

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I have the only **Steam Bee-Hive Factory** in South Texas. **Root's Goods, Dadant Foundation,** and **Bingham Smokers.** Safe arrival guaranteed on everything. ☞ Send for FREE Catalogue, that tells all about Queen-Rearing.

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Champion of the World, brightest pink, the best rose ever introduced. **Henry M. Stanley,** apricot yellow, very fragrant. **Pearl of the Gardens,** deep golden yellow. **Bridesmaid,** rich pink, none better. **The Queen,** pure white, always in bloom. **Christine de Nonc,** rich maroon and deliciously sweet. **Princess of Wales,** amber yellow, deepening to orange. **Rheingold,** beautiful shades of saffron and tan. **Star of Gold,** the queen of all yellow roses. **Waban,** a great rose, in bloom all the time. **Golden Gate,** creamy white and old gold. **Francisca Kruger,** coppery yellow and peach. **The Bride,** the loveliest of all white roses. **Queen's Scarlet,** richest dark velvety rose. **Princess Bentrice,** canary yellow, edged bright rose. **Etoile de Lyon,** richest deep sulphur yellow. **Souvenir of Wootton,** richest crimson in clusters. **Catherine Mermet,** everybody's favorite. **Mad. Camille,** beautiful salmon and rosy flesh. **Mad. Caroline Testout,** large handsome flowers of glowing pink.

We will also send our Iron Clad Collection of 14 Hardy Roses, all different colors, $1. Try a set. 20 Chrysanthemums, all prize winners, $1. 16 Geraniums, double and single, flowered and scented, $1. 15 choice Begonias, different kinds, $1. 40 packets choice Flower Seeds, all different kinds, $1. Our handsome, illustrated Catalogue, describing above Roses, Plants and all Seeds, mailed for 10 cts. stamps. Don't place your order before seeing our prices. **WE CAN SAVE YOU MONEY.** We have large two year old roses for immediate effect. Liberal premiums to club raisers, or how to get your seeds and plants free. We are the **LARGEST ROSE GROWERS IN THE WORLD.** Our sales of Rose Plants alone last season exceeded a million and a half. When you order Roses, Plants and Seeds, you want the very best. Try us.

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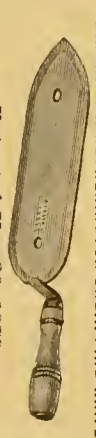
Bingham is a Specialist and Bee-Keeper. He makes only his own **Inventions and Improvements,** and keeps to the front on them all, and has for 16 years. **Others follow.**

This Cut represents a "Doctor," weighing 22 ounces, having a 3½-in Stove, wide shield, wire handle, and bent movable hood — largest Smoker made. It weighs **half-pound less** than any other 3½-inch Smoker, and will last 10 years. Burns anything, and never disappoints you. I make 5 Sizes, all on the same plan, and equally good, but of different capacities for fuel. The smallest—Little Wonder, 1¾-inch stove—is suitable for Beginners, and as an Extra when more than one Smoker is needed. The Conqueror, 3-inch stove, and the Large, 2½-in. stove, are just like the Doctor except in size. The Plain, 2-inch, and Little Wonder, 1¾-inch stove, have narrower Shields and smaller handles—in other respects like the Dr., and Conqueror and Large. I am the inventor of these Tools, and for 16 years they have been a credit to the inventor and a blessing to bee-keepers. The KNIVES last a lifetime, and, like the Smokers, are **absolutely perfect—never can be improved.**



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BEESWAX ADVANCED.

Will pay 31½c. Cash for absolutely pure Beeswax, that will stand chemical test. Let me have all you produce. Have permanent market.

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Being the cleanest is usually worked the quickest of any Foundation made

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INDIANAPOLIS. IND.

A Binder for holding a year's numbers of the BEE JOURNAL we mail for only 75 cents; or clubbed with the JOURNAL for $1.60.

General Items.

Comparative Yields of Honey.

I must report my experiment as to the comparative yield of comb and extracted honey. On June 1, 1894, or before white clover bloomed, I divided my home apiary of 126 colonies in two equal parts—with these results: 63 colonies in 8-frame hives, run for comb honey, gave 450 pounds of honey, and 30 swarms increase; 63 colonies (40 of them in 10-frame hives) gave 3,310 pounds of extracted honey and no increase.

They were all in the same yard, and with equal care and skill. Just think—over 7 pounds of extracted to one of comb! I have been producing comb honey for 16 years, but I think no such a difference of yield ever happened before. I shall try the same experiment next season in the same apiary, and hope to find a different result.

Maustou, Wis. F. WILCOX.

This "Handel" Handles Bees.

Seeing some of the boys' letters in the American Bee Journal, I thought I would write. I am just starting in the bee-business. I have two colonies. We have about 100 colonies all stored away in the bee-cellar. I have some old hives, and would like to transfer the bees into frame hives. When would be the proper time to do it? I got 100 pounds of honey last year, and 125 the year before. In 1893 I hived 50 swarms of bees. Most of the time I fold my sections and make cases in the forepart of the summer. I love to work among the bees, and they hardly ever sting me, unless I pinch them. We had a fine winter here until to-day; it is now snowing very hard, and most of the places it is over a foot deep.

CHARLES D. HANDEL.

Savanna, Ill., Jan. 27.

[Glad to hear from you, Charles. You'll make quite a writer as well as bee-keeper, if you keep on.

The best time to transfer is when the bees are about to swarm, and are busy at gathering honey. But it can be done any warm afternoon.—EDITOR.]

Getting Honey and Pollen.

I have been looking over my bees the last few days, and I find some colonies with five combs of brood; all have three combs partly filled. Early willow trees are getting leaves, and will have tassels in a few days. Bees are getting honey and pollen from swamp maple. H. C. AHLERS.

New Orleans, La., Feb. 6.

Essays at Conventions.

Bro. Abbott does me altogether too much honor to suppose (see page 90) that I could have controlled the program of the Northern Illinois Horticultural Society, of which I was not a member at the time the program was built, simply because I lived where it met. And why should it seem to him a strange thing that I should be a member of, and take part in the deliberations of, a society which "had essays?" To his certain knowledge I've done that same year after year before. True, I've also attended some conventions where there were no essays, and they were always counted of the very best character. No one to my knowledge ever found fault because there were no essays at those conventions, but it is not uncommon to hear fault found where essays are permitted.

A good essay in its place is a good thing. The danger is as to its abuse in a convention. At that same convention of which he speaks in Marengo, there was an essay read that made all "feel tired," and the officers would have given something if it had never been on the program. Now I'm not a

prophet, or the son of a prophet, but sometimes I can see what a face looks like, and after looking at the face of a certain President down at St. Joe, I'd like him to give me a categorical answer to the question whether there was no essay read there that he would rather had omitted.

I give Bro. Abbott my gracious permission to listen to essays at conventions, and also to write them. Probably I shall listen to them myself, and possibly write them. All the same, so long as it's the common thing for more or less of them to be of such character as to do more harm than good, I believe it would be the better plan to omit them.

Although I couldn't be there, the editor is quite right in thinking the thought of that Wisconsin convention would make my mouth water. I attended a number of such conventions, and they were good, and some of those Wisconsin men helped to make them so. C. C. MILLER.

Marengo, Ill.

Good Honey Crop—Wintering Well.

My honey crop was good this year. The bees are wintering well so far. I did not put mine in until Dec. 26.

JOSEPH WEBER.

Marysburg, Minn., Jan. 29.

No Surplus for 2 Years—Destitution.

We haven't had any surplus honey from our bees for two years. Hail destroyed our crops in 1893, and the hot winds and no rain in 1894. I think that the honey the bees are trying to winter on will kill them all off before spring, as it is very dark and bitter. My bees are all dead now. There are a great many people here that are in very destitute circumstances. I will ask all fellow bee-keepers, where they have been blest with crops, to ask each church and Sabbath school to take up a collection, and forward it here for distribution among the people that are in destitute circumstances.

Kenesaw, Nebr., Jan. 26. A. J. RICH.

Bees Doing Well.

This morning it was rainy, and the sleighing is pretty nearly used up. The mercury was at 44 degrees at noon. It turned cooler this evening, the mercury going down to 26 degrees.

Ionia, Mich., Jan. 21. JACOB MOORE.

Bright Prospects in California.

The prospects in southern California, for both the agriculturist and apiculturist at this time of the year, could not be brighter. From Dec. 1 to Feb. 1 there has been 11½ inches of rainfall here in Riverside, which is just immense! My bees are gathering quite a little honey from eucalyptus, pepper trees, and other sources at present.

Riverside, Calif., Feb. 6. F. S. POND.

Condition of Bees in Tennessee.

The winter, so far in East Tennessee, has not been very favorable for bees. The cold wave of Jan. 12 and 13 run the mercury down in some localities to 12 degrees below zero. This was for only a short time, but where bees on the summer stands were not well protected, it was a severe test to them, and I am sure many queens were lost. A laying queen cannot stand cold like a queen not laying, and before this snap the weather had been such that many queens were laying.

As to stores and strength of colonies, I have never seen bees in better condition at this season of the year, and from the rainfall we have had, the prospects now for the coming season are real good, and bee-keepers here are generally hopeful.

The indications now are that the coming season will add many persons to our pursuit in East Tennessee. The fact is now established that bee-keeping here will pay, and the heretofore doubting ones are willing to engage in it. To this we have no objection; there is room enough for us all, and the country will be bettered thereby. If we could have an apiary at every suitable situation in this section, operated intelligently, and on a scale sufficient to gather our wasting sweets, it would be one of the greatest boons to our people.

H. F. COLEMAN.

Sneedville, Tenn., Jan. 28.

Coldest Winter for Several Years.

We are having the coldest winter that we have had for several years, and the coldest spell now that we have had this winter. I fear bees will suffer greatly from the cold.

A. T. MULL.

Knob Creek, N. C., Feb. 8.

A Beginner's Good Report.

Last year was my first experience with bees. I had three colonies—two in 8-frame hives, and one in a box-hive, which I transferred in July. I got two swarms from the box-hive colony, and one from one of the others. One did not swarm. From the latter I got 106 pounds of honey in one-pound sections, and 100 pounds from the rest. The honey season was from July 21 to Sept. 1. I thought that was doing well, without experience, bee-books or bee-paper; but I think I shall do better this year, as I now have the American Bee Journal. I think it is a grand paper. I read every word in it. A. P. GREEN.

Cedarhome, Wash., Feb. 4.

The Severe Blizzard in Florida.

Another blizzard struck us last night. It was even more severe than that of Dec. 28 and 29, and of course more disastrous in its effects, as most vegetation was in tender growth. The orange trees were nearly all full of young growth, containing the fruit-buds, and it is likely that oranges and orange honey from Florida will be at a premium this year. It is a discouragement in all lines of agriculture, and fruit farming particularly, as also to bee-keepers, for the large honey crop here last year had attracted the attention of many Northern bee-men, who would have become settlers.

I am a printer-bee-keeper (engaged on a local paper), and from both stand-points I consider the American Bee Journal as excellent. You must work on a very close margin to give so much good reading matter, in such good style, for the small sum of $1.00. C. S. HARRIS.

Holly Hill, Fla., Feb. 8.

[Yes, Friend Harris, you are quite right. The weekly American Bee Journal at $1.00 a year is "dirt cheap." There is no bonanza or gold-mine in it—for the publishers. But there's a heap of hard work. Still, 'tis very invigorating to receive so many kind and encouraging words as have come to me the past few months, and it helps to lighten the burden.—EDITOR.]

A Sudden Change of Weather.

Saturday our deep snow commenced to go a little. Sunday it was so warm (42 degrees above) that a few bees came out, but yesterday it was warm. The snow went rapidly, and by noon it was all gone, I might say. And the bees came out in great numbers. At 2:30 p.m. it was 68 degrees above zero. My bees that are out of the cellar are packed in a long, low shed, the shed being only about six feet high, and the roof was covered with bees, while the air was full of them flying.

I was working in my shirt-sleeves, helping them clean the hive-entrances with a small wire. The sun was shining so brightly that it was almost like a summer day, when a sharp puff of wind struck me. I looked in the west, when I saw there a long, dark cloud approaching. In an instant the sun was darkened by the cloud, and the air got so cool that I had to run for my overcoat. Bees that were flying dropped suddenly to the ground never to rise more, while those on the roof became so chilled they never moved out of their tracks. In one hour the mercury had dropped to 26 degrees above zero, making a drop of 42 degrees.

I got a broom and swept up from the roof of the shed nearly a peck measure full of bees, and lots the wind blew away as soon as I had loosened them with the broom, as the wind was blowing a gale at the time. I am uneasy in regard to the colonies, for fear they did not get a cluster formed in time to withstand the cold.

The bees I swept up I took down cellar and dumped them in a weak colony, and in a few minutes there was the biggest uproar in that colony I ever heard. There is now perhaps a pint of dead bees on the bottom-board, but I don't know whether they are those the weak colony killed, or some of the chilled that failed to come to life. It is rather early to commence to manipulate bees, some will say.

My colonies must be greatly depopulated, as bees perished in great numbers. In fact, I think none survived to get into their hives, only perhaps a few that were only sticking their heads out of the entrances.

I have up to date lost no colonies, either in the cellar or out-of-doors.

CHAUNCEY REYNOLDS.

Fremont, Ohio, Jan. 22.

Bees in Good Condition.

I have two colonies of hybrid bees in the cellar in good condition. Our main honey-flow, last season, was from mustard, of which we have plenty. The weather here is very cold this winter, with but little snow. It has been as cold as 30 degrees below zero. EVAN J. DAVIS.

Tracy, Minn., Feb. 5.

Report for 1893 and 1894.

I commenced bee-keeping in 1893 with two colonies of bees, increased to 6, and got 165 pounds of comb honey. I cut three bee-trees, and bought 9 colonies of bees in the fall, which made 18 colonies. They all came through the winter in fine condition. In 1894 I got 712 pounds of honey, and increased to 30 colonies. I never saw a queen, or a hive with movable frames until 1893. The past season was too dry, and my neighbors wonder why I get honey and they don't. I tell them that I take the American Bee Journal, and I follow its directions. I like it just splendid. It is the first paper I open when I get my mail.

J. W. PAYNE.

Humrick, Ill.

From a City Boy Bee-Keeper.

I can't help writing since I saw something again in the American Bee Journal from Chas. W. Sanford. I was going to write before, but I kept putting it off. I am a boy bee-keeper, and take a great interest in the business. I have four colonies of Italian bees in Langstroth hives, all packed for winter on the summer stands. This is my fourth winter, and I have not lost a colony yet. Last season was the poorest season I ever had—had only 10 pounds of honey from my bees, and one swarm, which I had to feed in the fall to keep it from starving.

We are having pretty cold weather now—sometimes the mercury is down to zero, but it does not stay down this low very long.

There is one thing I have noticed about my hives, and that is, there are a great many bees dying during the cold weather. I think Mr. Thomas Thurlow (see page 67) is right in blaming it on the shallow Langstroth frame, for I have a box-hive in which the frames are about 2½ inches deeper than the Langstroth frame, and I find very few dead bees in this hive.

I take the American Bee Journal, and it is a great help to me. JOHN R. SCHMIDT.

Cincinnati, Ohio, Feb. 1.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Feb. 7.—The weather has been so cold that it prevented the shipping of comb, and the trade has been light to local dealers. Choice white comb sells at 14@15c. There is demand only for that put up in excellent shape. As a rule, dark grades are slow, prices ranging from 9@10c.; good, light color, 12@13c.
Beeswax, 27@28c. R. A. B. & Co.

CHICAGO, ILL., Dec. 27.—Up to the present the sales on honey have met with our expectations. We have received considerably more honey than we figured on handling, owing to the short crop report, and we think the early shippers reaped the benefit. However, we are now getting the average price, viz.: Fancy, 15c.; white, No. 1, 14@13c. Extracted, 6@7c.
Beeswax, 28@29c. J. A. L.

CINCINNATI, O., Feb. 20.—Demand is quiet for all kinds of honey. Best white comb honey sells at 14@16c. in the jobbing way. Extracted, 4@8c.
Beeswax is in good demand at 23@28c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, Mo., Jan. 7.—The demand for both comb and extracted is light. Supply good. We quote: No. 1 white comb, 1-lbs., 14@15c.: No. 2 white, 12@13c.; No. 1 amber, 13c.; No. 2 amber, 10@11c. Extracted, white, 6@6½c.; amber, 5@5½c.; dark, 4½c.
Beeswax, 22@25c. C. C. C. & Co.

PHILADELPHIA, PA., Feb. 15. — Comb honey is very plenty and slow of sale at 12@13c. Extracted in fair demand at 5@6½c.
Beeswax scarce at 30@31c. W. A. S.

BUFFALO, N. Y., Jan. 21.—The honey market is very quiet. We quote: Fancy, 13@14c.; choice, 10@12c.; off grades moving slowly, trade being only on fancy; buckwheat slow at 8@10c. Extracted very dull, at 5@6c.
Beeswax, 28@30c. B. & Co.

NEW YORK, N. Y., Feb. 20.—We are gradually working down our stock of comb honey, and the indications are that we will succeed in disposing of all of the white honey and possibly all of the dark during the spring, at following quotations: Fancy white, 1-lbs., 12c.; fair, 10c.; buckwheat, 8@9c. The market is well supplied with extracted honey. Demand is fair for choice grades, while common stock is neglected. We quote: White clover and basswood, 5½@6c.; buckwheat, 5@5½c; Southern, 45@55c. per gallon, according to quality. Beeswax firm and in good demand at 30@31c. H. B. & S.

SHIP Your Butter, Eggs, Poultry, Veal, Beans, Potatoes, Hides, Pelts, Wool, Hay, Grain, Green and Dried Fruits, or ANYTHING YOU MAY HAVE to us. Quick sales at the highest market price and prompt returns made. Write for prices or any information you may want.
SUMMERS, MORRISON & CO., Commission Merchants,
174 South Water St., Chicago, Ill.
REFERENCE—Metropolitan National Bank, Chicago.
6A13t Please mention the Bee Jounral.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

J. A. LAMON, 43 South Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 28 & 30 West Broadway
CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.

Kansas City, Mo.

CLEMOMS-MASON COM. CO., 423 Walnut St.

Buffalo, N. Y.

BATTERSON & CO., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

Philadelphia, Pa.

WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

Doctor's Hints

By DR. PEIRO, Chicago, Ill.

Bacilli Scare.

More than ever is the subject of bacilli being written, which adds greatly to public fear. Why is not the fact stated in this connection, that just as many bacteria live to feast on the others, as the big fish live sumptuously on the little fish.

Use of the Tonsils.

The question as to what the tonsils are for has puzzled the doctors quite as much as the public. The latest assertion is that the tonsils secrete a species of bacteria that prey upon another kind that dangerously infest the throat; and that diphtheria is often prevented by the tonsilar secretion.

Adam's Apple.

What's Adam's apple? It is that prominent lump that sticks out of some people's throats, just above the neck band of the shirt. It is the frame-work in which the vocal chords—the music-box of humanity, as it were—are located. It is claimed that this projection is an indication of superior adaptation for singing. If so, the voice is most likely to prove more effective in the basso range, because the vocal chords are necessarily longer. The longer the chords, the deeper tones.

Convention Notices.

CALIFORNIA.—The next annual meeting of the Central California Bee-Keepers' Association will be held in Selma, Fresno County, Wednesday, Mar, 6, 1895.
Lemoore, Calif. J. F. FLORY, Sec.

MINNESOTA.—The regular semi-annual meeting of the Southern Minnesota Bee-Keepers' Association will be held on the first Monday in May, 1895, at LaCrescent, Minn. All bee-keepers invited. E. C. CORNWELL, Sec.
Winona, Minn.

UTAH.—The Utah Bee-Keepers' Association will hold their semi-annual meeting on Thursday, April 4, 1895, at 10 a.m., in the Fish Commissioner's rooms in the new city and county building, Salt Lake City.
Provo, Utah. GEO. E. DUDLEY, Sec.

TEXAS.—The Texas State Bee-Keepers' Association will hold its 17th annual convention at the apiary of W. R. Graham, in Greenville, Tex., on Wednesday and Thursday, April 3 and 4, 1895. All interested are invited to attend. "NO HOTEL BILLS."
Ft. Worth, Tex. DR. WM. R. HOWARD, Sec.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association on March 16, 1895, at Goodno's Hall, in Bronson, Bourbon Co., Kans. It is the annual meeting, and all members are requested to be present, and all bee-keepers are cordially invited. J. C. BALCH, Sec.
Bronson, Kans.

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35th Year. CHICAGO, ILL., MARCH 7, 1895. No. 10.

A Few American Bee-Editors.

No. 1—Ernest R. Root.

No. 2—W. Z. Hutchinson.

No. 1.—Mr. Ernest R. Root was born at Medina, Ohio, June 23, 1862. For a number of years he has been the real editor of the apiarian part of Gleanings in Bee-Culture, and is probably the most widely known of the group shown on this page.

No. 2.—Mr. W. Z. Hutchinson, editor of the Bee-Keepers' Review, was born in Orleans county, N. Y., Feb. 17, 1851. He has attended more bee-conventions, and has been elected Secretary of them more often, than any other prominent

No. 3—L. D. Stilson.

bee-keeper of to-day. He is now the Secretary of the North American.

No. 3.—Mr. L. D. Stilson, editor of the Nebraska Bee-Keeper, and Vice-President of the North American Bee-Keepers' Association, was born in Alden, N. Y., July 26, 1839. Besides his editorial work, he lectures on bees in the Nebraska State University and at various Farmers' Institutes.

No. 4.—Mr. R. F. Holtermann was born in Hamburg, Germany, June 14, 1860. He is editor of the Canadian Bee Journal, and President of the North American Bee-Keepers' Association. He speaks German, and is fairly well acquainted with French. You can see him in Toronto—next September, I believe.

No. 4—R. F. Holtermann.

No. 5.—Modesty forbids saying more of the last one represented than that he was born two miles south of Alliance, Ohio, Feb. 21, 1862—which makes him almost twin brother to No. 1.

No. 5—George W. York.

How to Increase Bees When Natural Swarming is Not Wanted.

BY G. M. DOOLITTLE.

A correspondent writes me that he has 40 colonies of bees, and that his business is to be such the coming summer that he cannot be at home in the middle of the day during swarming time, and wishes me to tell how he can manage so as to increase his bees and still have them do good work in storing comb honey. As I have many similar letters to this, I will give what I would reply to each, in the columns of the American Bee Journal.

After trying nearly every plan of artificial increase which has ever been given, I am satisfied that none of them will give as good results as will natural swarming; but where one is situated as is the writer of the above, of course a substitute for the good old way will have to be resorted to. Knowing that there were times when increase other than natural swarming would be very desirable, I kept a record of all my experiments while trying the various plans of making swarms, as given at different times to the public, and, according to my views, the two following come the nearest to nature's way of any now before the world.

The first plan I have practiced quite extensively for years, but prefer the last under conditions suited to its use. All the particular difference there is in the two plans is that, with the latter, a new queen is given to the swarm, leaving the old one to continue to do duty in the old hive, while with the former the old queen goes with the swarm, the same as she does in natural swarming, thus leaving the bees to rear a queen of their own. By giving each part a laying queen, quite a gain is made, still this first plan is a good one where one cannot rear the queens before he makes the swarms, or feels too poor to buy them. None of the plans of artificial increase should be used till the hive is quite well filled with bees, and the bees themselves are preparing for swarming.

When the proper time has arrived, go to any colony from which you wish to take a swarm, and after having removed the cover and quilt or honey-board, drive the bees out of the way with a little smoke so that you can shave the cappings off from some of the sealed honey at the tops of the frames, unless you think they have plenty of unsealed honey in the hive. Just previous to doing this, you should find the queen and cage her so you can put your hand on the cage just when you like.

Having both of the above done, close the hive and beat on it with the fist, at the same time blowing smoke in at the entrance, just enough to frighten back the guards as they come out to drive off the intruder. Having the guards all turned back, give the hive several sharp blows, enough to cause the bees to thoroughly fill themselves with honey; and if more than one swarm is to be made, go to the next hive and prepare them in the same way, while the first are filling themselves; otherwise you will have to wait till the bees have their sacs full. When this is accomplished, set the cap of any hive, or any box will do, on a wide board a little way off from the old hive, and proceed to shake the bees off the frames till you think you have about three-fourths of them, shaking them in front of the cap or box on the wide board, into which they will run as fast as they are shaken off, if the same is raised up a bee-space on the side next to where they are shaken.

Lastly, take the frame having the queen in the cage on it, remove the cage and shake the bees off from it and, while they are running in, release the queen and let her run in with them so she will be with the made swarm. Now close the hive, when the returning bees from the field, and what were left on the combs and about the hive, will make the old colony in about the same condition it would have been in had it cast a swarm.

Next take the cover having the bees in it; carry it to the shade of some tree, and after setting it down, lean it up against the tree with the open side out, exposed to the light. Leave them thus while you are making other swarms, or for about an hour to an hour and a half, when they will conclude they are a separate colony, and will behave just like a natural swarm, having clustered in the box the same as a swarm does on a limb. Now hive them the same as you would a natural swarm, and they will work the same, or as nearly so as is possible to have bees do outside of natural swarming.

The next way, and the one which I prefer where I have laying queens to spare, is to proceed the same as above till you get ready to shake off the bees, when they are to be shaken into a box instead of into a cap. This box is to be made of a size to hold about a half bushel, the two sides of which are to be of wire cloth, one permanently nailed on, and the other to have the wire cloth nailed to four small strips so that four small nails, one through the center of each strip, will hold it fast to the box, yet make it readily removable when you wish to get the bees out. In the top of the box is to be bored a hole of the right size to admit the small end of a large funnel, such as is used in putting up bees by the pound, and over this hole is to be fixed a slide so that it can be closed as soon as the bees are in.

Having the box and funnel, proceed to shake the same amount of bees down through it into the box as you did in the former case in front of the cap; but instead of putting the queen with the bees in the box, let her run back into the hive. Now carry the box of bees to some cool place, preferably in the dark, and leave them undisturbed for four hours, when you are to go and get the spare queen, from one of your nuclei, or otherwise, and after going where the box of bees is, jar the bees to the bottom of the box, by setting it on the floor suddenly, so that they will not be running out while you are putting in the queen, and immediately let the queen run through the hole into the box. Now close the hole and leave the bees till sunset or the next morning, when you find them clustered and ready for hiving, the same as a natural swarm would be, having accepted the queen which you gave them, as their own mother. Hive as before and the work is done.

It is well in either case to give the newly-hived swarm a frame of brood from the old hive to start them with, and make matters seem more home-like. In using this latter plan it is best to take the bees between the hours of 8 and 10 a. m. if it can possibly be done at that time. In writing this out it seems like a good deal of work, but where making many swarms the work goes on rapidly, as the bees are filling themselves while you are working, so there is no waiting. In this way swarms can be made about as fast as natural swarms could be cared for, while they work nearly as well after they are made.

Borodino, N. Y.

The Production of Comb Honey.

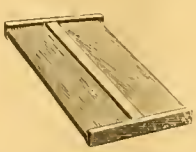
The fourth of a series of articles on this subject.

BY EMERSON T. ABBOTT.

THE FLAT HIVE COVER,

which is used on the dovetailed hive, is, to my mind, another of our modern blunders, and is therefore objectionable in the production of comb honey. First, it is hard to keep it on the hive, if not stuck fast with propolis, and, if it is, it is hard to remove it without jarring the hive more than is desirable. The main objection which I have to it is that it does not give space enough above the sections. This is a very serious one in a warm climate. With a flat cover fitting down within ¼ or ⅜ of an inch of the sections, and no shade, the super will be so hot that the bees cannot remain at work in it during the heat of the day. There is no question, in my mind, but what a thin honey-board with a ¼-inch bee-space between it and the sections is the very best covering that can be had for the sections. With a cover so constructed that there is an inch or more of space above this honey-board, the hive will always be cool enough for the bees to work in the supers, and I should not think of using any other kind of a cover.

Another objection to the flat cover is, it is constantly warping and getting out of shape, so it will not fit down snugly on the hive.



The Higginsville Hive-Cover.

The so-called improved cover, as shown in the illustration, which has been lately introduced, seems to me to have all the objectionable features of the old flat covers, and nothing to render it more desirable. It is true it has sloping sides, but of what benefit are they? Every hive should slant to the front with a sufficient pitch to run off all of the water from the cover. This slope aids the bees greatly in cleaning out the hive, and in defending it against robbers. It also keeps the water from beating in at the entrance, and aids in the removal of the moisture which may accumulate in the hive during cool weather. Of what use are the sloping sides on a hive slanted to the front in this way?

About the only thing that can be said in its favor is that it will let the water run off at the sides instead of the ends,

as the end cleats extend above the cover boards. If slanted in this way and not kept well painted, it will catch water in the crack formed at the union of the cover cleat and the top boards, and will soon rot out. I see, since writing the above that Dr. Miller claims that this cover will not warp, "for two pieces will seldom if ever agree to twist together." No, but they do not need to do this in order to get the cover out of shape—one will go one way and one the other way, and the mischief is done.

About as good an arrangement as can be made for a cover is a rim about two inches wide, made to fit any part of the hive, and having two boards for a top cover, with a strip of bent zinc fitted in saw-kerfs, to cover the crack. Of course such top-boards should be cut out of well-seasoned lumber, and they should be nailed on properly and kept well painted. If any of these precautions are neglected, they will cause trouble. I have had them in use for years and none of them have ever given me any trouble when made out of well-seasoned lumber and properly nailed. Many times they are not driven up properly before they are nailed, and then there is sure to be a bad crack soon.

It would seem that I had offered enough objections to this dovetailed hive, but I have one more which is not quite so serious. I do not like the surplus arrangement.

I REFER TO THE SECTION-HOLDERS.

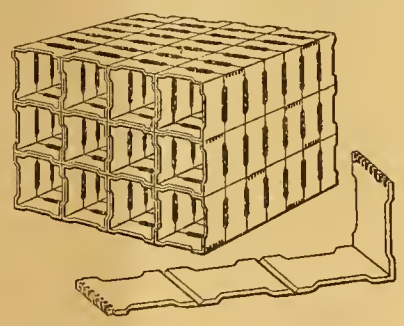
I tried these several years before the above hive was made and decided I did not want them. They were made by the Falconer Mfg. Co. I very much prefer the pattern slat which rests on a flauge made inside of the super, with boards at the end. If I used them without separators, they were always getting out of shape. As I do not believe it pays to go to the expense of using separators, I long since discarded the section-holder. They are very good with separators.

THE BOTTOM-BOARD,

of this hive, is all right, as I do not see how a man who handles a large number of colonies of bees can get along with a bottom-board nailed fast to the hive. It is very convenient to have it so it can be removed when desired, and it can be fastened so securely and with so little expense by the use of the Van Deusen clamp, or simple hooks, that I am led to wonder why any other kind but a loose bottom is made. No, not that it is made, for the factories make what the people want, but I am greatly surprised that anyone who has a desire to have things convenient should want anything but a loose bottom-board.

As to HOW MANY STORIES HIGH

a hive should be, it depends entirely, in my opinion upon the strength of the colony and the length of the honey-flow. No one should think of beginning the season with less than four



supers for each strong colony. If the honey-flow lasts any great length of time, it will be better to have six, or even more. I am persuaded that during a good honey-flow it is about as easy to get six supers filled, if properly manipulated, as it would be to get two filled, if there is only one super used at a time, and each is left on until entirely filled. Here is where I believe in large hives—large in the upper story; the larger the better, provided the bees go up and occupy them. If there is ever a time when the saying, "Give the bees room according to their strength" is true, it is during a rapid honey-flow. Of course, it requires the exercise of some judgment to know when to commence enlarging the hive, and how fast to enlarge it; but, in my opinion, it will win every time, if properly managed.

The super which has the least number of loose parts about it, and one which will give the bees access to every part of it direct from the hive, suits me the best. The bees should have the same direct communication with the outside row of sections that they have with any other, if one expects them to finish up the outside sections properly.

As I do not advocate the use of separators, I prefer the

SECTIONS OPEN ON FOUR SIDES,

as explained by Mr. Oliver Foster in his book on "Comb Honey." (See illustration below.)

This gives a connected passage through every part of the super. The bees can conserve the heat better where sections are so arranged. They will enter the super more readily and will fill out the sections on all sides in better shape. By using full sheets of foundation which come within ¼ inch of the section on each side and at the bottom, there will rarely be any sections bulged so they cannot be crated all right with a little care. Those which are bulged, if any, can be sold at home, and I am sure the loss and bother will not be as great as the cost of separators. Such sections require a little more care in cleaning, but not enough to add materially to the cost of the honey.

I also prefer a super that fits down over the body at least at the sides by means of a shallow rabbet or a bevel. Such a super is not so apt to be left out of place, rests on the hive more snugly, and does not leave a crack. I say again, I could never think of tolerating a square joint, and I feel sure the time will come when the majority of those who have bees will agree with me; for, as I said before, our ideas about things operate very much as fads in fashion do. They come and go.

St. Joseph, Mo.

(To be continued.)

How I Managed to Get a Good Crop of Honey When Others About Failed.

BY C. H. STORDOCK.

It may look singular to any person reading the report of the Northern Illinois convention on page 53, that I should get a fair crop of honey, and those near me report almost a failure. But after I have explained the matter, I do not think it will look so strange.

In the first place, I think I have a good location, being just across the Illinois and Wisconsin line, in the Sugar River valley. My honey was gathered from basswood and heart's-ease. White clover was almost a total failure. So all I can tell about how I did it, is that I think I have good bees, a good location, and attended to my business when I ought to. I gave the bees all the room they required. I use the 10-frame Langstroth or Simplicity hive, with two extracting-supers to each hive; my honey was all extracted.

Another point is to have the colonies strong when the honey season begins. The way I do is this: When my bees begin to swarm, I proceed in this manner: As soon as the swarm is all out, I set the old hive back two or three feet, put a hive filled with foundation or combs on the old stand, and as soon as the swarm is in the new (I clip my queens), if it is a strong one, I open the old hive, shake or brush off the bees, and let them enter the new hive. If the swarm is a small one I leave the combs four or five days (by first moving the old hive to one side and a little back of the new one), before shaking the bees off, then cut the queen-cells off and give the combs of brood to the weakest colony in the yard, by first removing all the combs that have no brood, and so on till my colonies are all strong. By this plan a weak colony will have 10 combs of brood, and will be a strong one.

When my colonies are all strong enough, and more swarms issue, instead of giving the brood to other colonies, I leave the old hive near the old stand from five to seven days, then carry it to a new stand, *a la* Heddon.

I generally unite two such colonies by placing one on top of the other, with a queen-excluder between; in such a colony I rear two queens—one in the lower and one in the upper story.

In managing bees in this way a person will not get much increase, but honey, and not a large number of colonies is what I am working for.

My honey crop for 1893 was 15,340 pounds from 92 colonies.

Durand, Ill.

North American Bee-Keepers' Association.

BY E. S. LOVESY.

What can be done, if anything, to increase the usefulness of the North American Bee-Keeper's Association to the bee-industry, and its benefits to the members? I heartily endorse

the editor's remarks on page 423 (1894), and also those of Mr. Richardson on page 690. I think it is plain to every thinking mind that the North American should cut a larger swath; then, if it is possible to adopt some plan by which a respectable number of the bee-keepers of the country could be induced to identify themselves with the Association, it certainly should be done. I believe that if some of our prominent bee-keepers will interest themselves in this matter, and agitate the subject, much good may come of it, and cause the Association to take a great step forward. To accomplish this, I fully agree with Editor York and Mr. Richardson, that more meetings and more scope should be given the Association.

To illustrate: I would be in favor of dividing the whole country in four grand divisions, with one as headquarters and three branch associations. Suppose we say for No. 1, all that part of the country lying east of the Mississippi and Ohio rivers, and east of Lakes Erie and Ontario and the St. Lawrence river. No. 2, all between and north of the Mississippi and Ohio rivers, including Ontario and Quebec. No. 3 all west of the Mississippi river and south of the north line of Missouri, Kansas, Colorado, Utah, Nevada and California. No. 4, all west of the Mississippi river and north of the line of those states named, including British Columbia. Those divisions would meet near the center of the country. If any thing comes of this, those lines could be fixed by the Association. I simply illustrate the matter.

Now, then, suppose the headquarters was moved from one division to another each year, and the president of each branch association was a vice-president of the parent association; then if each grand division held two meetings each year, and supposing there were ten states or districts in each division, and the presidents of the State associations were vice-presidents of the associations in their respective divisions, and in turn if each county president was a vice-president in the State associations, it would come very near making one grand, harmonious whole, and all bee-keepers taking an interest in them could feel that they were a part of the great North American Bee-Keepers' Association.

Friends, shall we try to do something to endeavor to create more interest and a more fraternal feeling among our bee-keepers? I presume all will admit that something of the kind is needed—it is needed for the protection of our common interest, such as producing and disposing of the product of the honey-bee, and to preserve them against their enemies, etc. Our bee-keepers, like the rest of mankind generally, join the association more or less for the benefits that they expect to receive; then, in order to be successful, each association should take an interest in and try to adopt plans or methods for the benefit of its paying members.

Now suppose there were more associations and more meetings, would it not create a spirit of good-natured rivalry to excel each other in disseminating knowledge for the benefit of the whole? I have no personal interest in this matter, only a desire for the general good. One reason for throwing out these few general outlines is, whether anything comes of this agitation or not, I wish to see the West and South stand up and be counted with the balance of the country. While some of our bee-keepers may be more or less selfish, they are nearly all good-natured, and if some system could be adopted that would cause more meetings and more greetings, then, as they became better acquainted with each other, it would have a tendency to smooth down the rough spots, and as they would oftener meet to shake hands and exchange kindly greetings, they would be induced to form higher and better opinions of each other. As for myself, I consider this far above worldly wealth, for who would sell, if they could, those kind memories of the past?

Again, looking to the benefits that may be obtained by a move in this direction, we could at least have the question-box for the benefit of our bee-keepers, with much more satisfaction than they have now. The best method for wintering was asked for at the Chicago meeting, and "What can we do with foul brood?" was asked at St. Joseph. Where are the answers to those vital questions? Echo answers, "Where?"

I have had many inquiries of late in regard to lucerne. While I cannot vouch for what it may, or may not, do in the East, I believe it will do well in the South. It is one of, the very best paying crops here. One of our bee-keepers, Mr. Eastman, who has been a near neighbor to Dr. Miller, spent a few days with me in December. He was astonished when he looked at the slick coats of my horse and cow, when I informed him that I fed them exclusively on lucerne. My five best colonies of bees, the past season, gathered 1500 pounds of honey, mostly from lucerne.

If possible, I would like to hear from some of those I sent seed to last spring. Salt Lake City, Utah.

The Size of Hives and Frames.

BY W. C. GATHRIGHT.

I have been much interested in the articles on hive construction by F. L. Thompson and Edwin Bevins. I would be glad to hear what others have to say who have tried those deeper frames.

I like the 8-frame width for several reasons. It is easier to handle, takes so much less room in hauling and shipping bees, and, last and most important of all is, it seems to be *wide enough* for any colony of bees. But it is not deep enough to hold all the brood and bees a good queen can produce. Make the frames 2 inches deeper, and I believe that 8-frames will be much better than 10 Langstroth size, or 8 frames, either.

I am aware of the fact that the majority of the answers to Query 950 say no, but with such bee-men as the Dadants on my side, I feel pretty safe.

The objection made by some, to deep frames are, 1st. That they are not so easily handled; 2nd. They are not so good for comb honey as shallow frames; 3rd. They don't want two sizes of frames in the apiary; 4th. They are not the "Standard."

In regard to the first objection, I say I believe I can handle 8 deep frames quicker than I can 10 shallow ones. Bear in mind I am speaking of frames of brood, not honey. I would not recommend frames of this depth for extracting.

The theory seems to be that the deeper the frame, the more trouble it is to get it out without killing bees, but so long as the frame is considerably longer than it is deep, the difference is so small as to hardly be noticeable. But suppose you make the frame as deep, or deeper than it is long, then there would be trouble.

2nd. My experience teaches me that plenty of bees for the honey-flow is of more importance than any other one thing. Then, as the deeper frame winters bees better, is more suited to the queen's requirements, affording her room to lay her eggs in a circle without having to cross a bee-space and nearly 1½ inches of wood, I ask why is it not so good for comb-honey?

3rd. I wonder how many bee-keepers there are who extract from the brood-chamber—I do not, and I don't know of any who do. Half-depth frames seem to be gaining favor. With brood-frames 11¼ in. deep, our half-depth frames would be 5½ inches, allowing ¼ in. for bee-space. This I think would be a much better size than the half-depth Langstroth frame, which is, I think, entirely too narrow. The regular standard simplicity frame would be good to use in the supers for extracting, and I would think very seriously before discarding it for something else.

4th. As Mr. Thompson has quite covered the ground on this point and some others that I have omitted (See page 595; Nov. 8, 1894), I will skip over this.

I think this line would be quite interesting and profitable for experiment, and should it be demonstrated that something else is better than the standard size, let us begin to work toward it and ere long the *best* will be the standard. We are living in a progressive age, and bee-keepers, of all others, should not be satisfied to merely follow in the old ruts of those who have gone before, but strive to attain to the highest point of perfection in the science of our beloved pursuit.

Cameron, Tex.

A Consideration of the Bee for Business.

BY DR. J. P. H. BROWN.

That type or variety of bees that can obtain or collect the greatest amount of nectar is unquestionably the most profitable for the bee-keeper.

A novice judging from the advertisements of five-banded bees, would at once infer that they were a new variety. Such is not the case. They are only the pure Italians, or a cross with Cyprian blood, bred up. Besides, the queens do not invariably produce all five-banded workers, but often more three or four banded.

I like to see a beautiful yellow bee. They look nice. "A thing of beauty is a joy forever." It is really a grand sight to see a lot of young golden beauties playing out—taking their first fly in front of their hive on a clear, sunny day, with the light peering through their yellow bands.

Now for a bit of bee-history: I got my first Italians in 1870. I purchased queens from a number of different breeders. I got queens from Mr. Alley that produced very yellow-banded workers—some showed four and five bands; while those from Dr. Hamblin (long since dead) bred workers

with leather-colored bands. These had great individuality of character and left their impress in my apiary for some generations. The Alley stock was shorter lived.

I commenced to import the most of my breeding stock direct from Italian breeders; and since then I have imported hundreds of queens, and spared no expense nor pains to breed up to the greatest perfection.

By a careful and persistent effort to breed from light-colored queens and yellow drones, I gradually bred out the dark, and in a few years I had a bright-yellow banded bee, many of which showed four and five bands. But as I progressed in the development of yellow bands I found I had approached a point where the capacity for honey-gathering diminished, while the leather-colored queens and workers, like the Hamblin strain, were my best honey-gatherers.

In breeding for beauty, the honey-gathering qualities are too prone to be ignored. These qualities require muscular development—power of wing and energy. It is a law governing animal culture that the highest attainments can only be secured at the expense of other qualities. In the human species the greatest intellectuality is attained at the expense of muscular development and at a diminution of fecundity. Hence, unless the physical qualities required to enable the bees to be good foragers be kept in view in breeding, it is very easy to produce an enervated strain.

Excessive swarming is the bane of the honey-producer, and such traits should form no part of the bee for business. Cyprians and Syrians are notorious swarmers, and this trait will crop out in their crosses with other varieties for generations. But I want no non-swarming variety of *Apis mellifica*, if honey is any object. God has implanted the propensity in the bee as a collateral means of perpetuating the species. It carries with it a desire to provide, accumulate, and hoard up for a time of want.

I have already stated that a yellow bee can be developed from pure Italians by a system of careful breeding. It can be more quickly accomplished by the introduction of Cyprian blood. Such crosses are bright and beautiful, and the yellow shows to great perfection. Many of them have a bright yellow crescent-shaped spot or shield on top of their thorax between the wings. But this mark is often found on well-bred Italians. The best test of Cyprian blood is their behavior when the hive is opened. They are quick to resent an insult, and when smoke is applied to them, they dance around, turn one end and then the other, and *dare* the smoke! They will only retreat when the smoke approaches fire. When panic-stricken, they will desert their combs and take to the sides of the hive.

I do not consider the imported queens from Italy, at present, any better than our home-bred ones. They average much lighter in color than those received years ago. During the furor for Cyprians in this country, they were also introduced into Italy and no doubt have crossed with their bees. For more information in regard to the varieties of the honey-bee, I refer the reader to an essay of mine on "The Geographical Distribution of the Honey-Bee," read at the North American Bee-Keepers' convention at Lexington, Ky., in 1881, and published in the November number of the American Bee Journal for the same year.

I have not penned the above with any desire to champion any of the parties concerned in the Atchley-Quigley-Doolittle controversy. We all have our ideal queen standard. Tastes differ. The interest of the honey-producer and the queen-breeder should be mutual. In the matter of queens, *merit* should rule, but it often unfortunately falls to the rear—slips out of the dictionary—and a conglomerate mass of brag, gas and cheek takes its place. Augusta, Ga.

Bee-Literature According to the Heddon Idea.

BY J. W. HOFFMAN.

MR. EDITOR:—Being a journalist of many years' experience, a constant and attentive reader of your valuable journal, and a "bee-crank," as the saying goes, I became peculiarly interested in the essay of Mr. James Heddon, on "Apicultural Literature," read before the Michigan State convention of bee-keepers, and published on page 99.

After reading Mr. Heddon's effusion through twice, very carefully, I failed to perceive why that topic should have been assigned to him for discussion. If for his wisdom and literary accomplishments, it certainly was a mistake, as he has allowed his evident love for invectives and innuendo to get the better of his judgment, while his bombastic and unpolished style is anything but pleasing.

If the topic was assigned to him on account of his knowledge and experience as one of the "spinal column of our business," as he is pleased to "dub" the honey-producers, and consequently his supposed ability to tell a bee-editor how to edit a bee-journal, and thus be the means of lifting the apicultural literature from the quagmire of degeneracy, and placing it among the journals of a realm where only royal jelly is served—then I am too dull, for I cannot see where the gentleman has shown the ability to make even an intelligent suggestion. He has not pointed out clearly and distinctively in what particular essential apicultural literature is degenerated or deficient, and he has certainly indicated no well-defined reform or policy through which it could possibly be brought to a higher standard. To sum it all up, I regard the essay as a mass of uncalled-for and intemperate criticism, out of which may be sifted a few vague hints, which seem more like stabs at some one else, over the editor's shoulder, than as a means of improving bee-literature.

I am not acquainted with Mr. Heddon, but I take it for granted that he is a gentleman who is respected in the community where he resides, and by those with whom he associates, and anything I say in this connection must not be considered as a personal reflection. Permit me to say, however, that if I read him correctly, he is one of those characters who love to chuckle over what they have written—who delight to tease the worm to see it wriggle and squirm, but without meaning any harm. If he ever mounts the rostrum, his arms are more eloquent than his tongue.

Now, Mr. Editor, let me tell you how to improve your journal according to the Heddon idea:

1st. In order to be thoroughly competent to write and select articles on apicultural subjects, you must at once become one of the "spinal column of our business," *i. e.*, a bee-keeper or honey-producer. Put in your order at once for at least 1,000 queens, and 4,000 pounds of bees, including all the latest styles in color and number of bands, and every known race. You must not buy any hives, frames, sections, foundation or other supplies, as that would help some supply dealer, but you must make them yourself—buy the raw material, lumber, etc., and make them by hand; this will give you practice—and you must become thoroughly practical, in order to be able to edit a bee-paper.

You must also have a laboratory equipped with all the latest appliances for making chemical and microscopical tests; and a library containing every known work on the subject of Apiculture, and you must read nothing else—that must be your only intellectual food; and be sure to have a copy of "Heddon's Essays" constantly on your desk. Your physical diet must also be carefully regulated in the interest of apiculture—eat honey, plenty of it, eat it three times each day, and every day in the year; and bees, too, worker-bees and drones (in season) on week days, and a queen or two for Sunday dinner. This will stimulate the market, and help out the "spinal column of our business."

You must be among your bees, in the laboratory, the library, the workshop, all day and every day, observing, experimenting, making tests, reading up, or making hives, etc. Your heavy articles you must only attempt to write by midnight oil, at which time you will be fully loaded with bee-knowledge, and all will be still within and without, save perchance the screeching of the owl.

If you have been in the habit of "sticking" a few type to help make both ends meet, or going out among business men to solicit an "ad.," or to attend to any other business matter, stop it! this is menial. Your position is higher; you must only read, write, think, and talk about bees and honey—all the other drudgery you must leave to hired help. Never mind the cost.

2nd. Be very careful about publishing any communications or articles from other bee-men. First get their pedigree, and no matter how extensive and varied their observation and study into the mysteries of apiculture, and hence no matter how valuable and interesting their communcations might be, if they are not actually a part of the "spinal column of our business," bar them out! Queen-breeders, experimenters and inventors of new appliances must absolutely have no chance to say a word through your columns—they are the *drones* of apiculture!

Every article that you do publish, you must comment on copiously, criticise mercilessly, both as to style of composition and as to the views or facts stated; and if your correspondent happens to be deficient in grammar or spelling, don't revise, but take off your gloves, and your shirt, if necessary, and roast him to a turn! Your comments should appear in the body of the article immediately following the paragraph to which they refer, and always in bold-face or italics, so they will stand out in marked contrast to the scribbling of your correspondent; and this, you know, would also produce a grand typographical effect—chromatic printing might be still more awe-inspiring. Your comments must be written in a

style of haughty grandeur, extremely technical, and wherever possible use Latin and French terms, and an abundance of irony and sarcasm!

At first glance you may not see the wisdom of such editorial work, therefore let me explain. Your problem is, to lift the apicultural literature of to-day from a state of partial degradation, and put it back to that standard of perfection as Bro. Heddon saw it, "years ago" (I suppose he refers to the time when "bee-gums" were in fashion). Now, in order to accomplish this—in order to eliminate this *foul brood*, stifle this *paralysis*, exterminate these *drones* and *parasites* which threaten the "spinal column of our business," an heroic treatment must necessarily be adopted. You must impress upon your readers, and especially your correspondents, your own perfect and superior knowledge of everything pertaining to apiculture; they must realize how little and insignificant they appear beside such an intellectual giant! And the effect of it? Why, you would see it at once, in your bank account, and in your subscription list (*i. e.*, if your subscribers do not pay too far in advance!). This course might not agree very well with your own spinal column—but the other? Why, bless you, my dear fellow, there is no telling how much "the spinal column of our business" would be benefitted by such an elevating of the apicultural literature of to-day!

3rd. The last and most important reform, which you must inaugurate in order that your journal may attain and maintain that high degree of excellence and perfection, and one which would cause the bleeding heart of every member of the aforesaid spinal column (not yours) to leap into his or her throat for joy, has reference to the mechanical and business departments—which I can put in a few words, viz.:

Increase the size and volume of your journal to twice its present size and capacity; print only on extra-sized and super calendered book-paper, of the finest quality and of heavy weight; illuminated cover, with a fresh lithographic illustration of an apicultural character on the title page of each number; raise your subscription price to $5.00 per annum, and your advertising rates to $4.00 per agate line—per insertion—no discount for large space or long time contracts! The advertising columns of your journal would soon be changed into sweetness and purity, white and clean as the driven snow with the mercury at 30 below. You might have difficulty in making both ends come together well, but this you could easily overcome by supplying a few extra links whenever necessary in the form of tens, twenties and fifties from your private exchequer! But you would have the satisfaction of ridding the columns of your journal of the supply dealer, the queen-breeder, the inventor of all the various adjustable, automatic, self-spacing, self-acting, reversible, non-swarming, wire-bottom, queen-and-drone-excluding, non-conducting, indestructible, time-and-labor-saving devices; the honey-dealers and various other drones and barnacles that are now sapping the life-blood, aye, the very marrow out of "the spinal column of our business!" These would all flee like rodents from a burning ship. They would know that they are not wanted.

What a grand achievement! Contemplate this glorious triumph! Behold yourself, Mr. Editor, perched upon the highest pinnacle of fame—the very apex of the aforesaid spinal column! Physically, from the terrible strain of this stupendous contest, more than likely you would succumb—but what is the sacrifice of one hero as compared to the salvation of many? Rest assured, however, you would never be forgotten. A magnificent shaft would mark your last resting place, with this epitaph:—

"ALAS, POOR YORRICK!"

He labored "honestly, earnestly, fearlessly and conscientiously" to save "the spinal column of our business," and—broke his own back!

Requiescat in pace.

Pardon me, Mr. Editor, for occupying so much of your valuable space, but I do feel like adding an earnest word of encouragement and congratulation to you. I know what it is to be a publisher and an editor. I know what the cost is, and what the income ought to be, but usually is not. I know the many difficulties and obstacles by which an editor is hampered, because I have been there myself. I can say honestly and frankly, that your journal will compare favorably in quality of contents, in variety of topics, in general make-up, and particularly in typographical appearance, with any other class journal of the same price extant. Your co-workers and principal correspondents seem to be men of honest purpose in writing on the various topics relating to apiculture, and I have often wondered that you were able to secure so much excellent talent; and I believe that every intelligent, unbiased bee-keeper who reads your journal, will agree with me in saying that 52 numbers of the American Bee Journal are worth just $10—if they take enough interest in apiculture to read it regularly and thoroughly.

Your faithful and progressive efforts in the interest of apiculture deserve not only the support and co-operation of every progressive bee-keeper, but also the most substantial and liberal patronage of every one who can make the use of your advertising columns profitable. Evanston, Ill.

[Thank you, Mr. Hoffman, both for the kind testimonial for the American Bee Journal with which you close your eloquent article, and for the clear and comprehensive manner in which you have elucidated the "vague ideas" of a wonderful would-be critic! As *I* now fully understand what is necessary to a *perfect* bee-literature; and as no doubt my readers must by this time be aware of the true spirit which prompted the writing of the most useless essay in question (and which never should have been assigned in the first place), this number will be a good one with which to end further discussion on this subject in the American Bee Journal.—EDITOR.]

That Italian Bee-History—Not Historical Facts, but Unreliable Statements.

Reply to C. J. Robinson, the Historian—
By M. M. Baldridge, of the "Far West."

The Good Book says: "All men are liars." Now, if this be true, then both Mr. Robinson and I are included. I plead guilty, of course! "Whom the gods would destroy, they first make mad." The latter part of that citation must apply, I think, to Mr. R.

As there has been a change of weather since my article on page 311 (1894) was written, I will now resume and conclude my examination of what I designated therein as "simply a symposium of unreliable statements." They will be found on pages 118 to 120 of the American Bee Journal for 1894, and I will do my very best to give them substantially as printed:

1. I challenge any one, says Mr. Robinson, to point out any incorrect statement recorded by me.

Before I am through, I think even Mr. R. will admit that I have pointed out not only one misstatement, but several of them. Now keep both eyes and ears open and see.

2. Mr. Parsons says in his official report, made to the Chief of the Patent Office, and printed on page 543 of the Agricultural Report for 1859, that "he purchased ten (10) colonies of Italian bees for the government, and ten (10) colonies for himself."

Now there is not one word in the report Mr. R. refers to about Mr. Parsons buying any bees for himself! I know this is true, for that Report lies right in front of me as I write this. And there is no excuse for such a misstatement from one who claims to be a reliable historian.

3. Mr. Parsons reported that he made a contract with one Mr. Hermann to buy ten (10) colonies of Italian bees for the Patent Office, and personally to transport them, in original hives, to America, but Mr. H. sent an Austrian, a Mr. Bodmer, instead.

I don't know what report Mr. R. refers to for this statement, but I do know that Mr. Hermann was not to accompany Mr. Parson's first purchase of ten (10) colonies of Italian bees, and in original hives, to America; and I also know that Mr. Bodmer did not accompany them at all. In short, no one came to America in charge of said purchase. The truth is, Mr. R., by not knowing the facts, has two separate importations of Italians so mixed up in his head that I must, by and by, try to explain matters more fully, then he will see the blunder he has made.

4. Mr. Langstroth says, on page 82 of the Bee Journal for 1881, that said bees were landed in New York April 19, 1860.

No, no, Mr. Langstroth has said nothing of the kind. He simply said that one of the importations of Italian bees was landed at that date, but Mr. L. did not say that it was the first importation of Italian bees that was landed there through Mr. Parsons' efforts. It may be news to Mr. R., and perhaps for the first time, to learn through me, that the ten (10) colonies of Italian bees were not in cigar-boxes, but in original hives, and that they were landed in New York several months prior to April 19, 1860. A few of those bees were still alive,

and were shown by Mr. Parsons to Mr. Langstroth, on the latter's first arrival at Mr. Parsons' home in the spring of 1860. See what Mr. L. says on that point in his article in the American Bee Journal, page 82, 1881.

5. Mr. Langstroth fixes the date of his visit to Mr. Parsons' apiary in the spring of 1856, whereas no Italian bees were imported direct from Italy until 1860.

Mr. R. knows, as well as any one can know, that Mr. Langstroth did not make said visit until the spring of 1860, and that the year, as printed, is simply a typographical error. What Mr. R.'s purpose can be for misrepresenting this fact can perhaps be best explained by himself. And are you sure, Mr. R., that no bees were imported direct from Italy, through Parsons, until 1860? It seems that you are not aware of the fact that those ten (10) colonies of Italian bees, in hollow logs, left Genoa, Italy, for America, in the fall of 1859, and that they were landed in New York prior to 1860. There must be some history about Italian bees that you have not heard of before.

6. Mr. Langstroth says there were some Italian bees consigned to Mr. Mahan in the shipment that was landed in New York April 19, 1860, but this cannot be true.

Mr. Langstroth says the Italian bees that were landed in New York April 19, 1860, were in small boxes, and that they were in three separate packages; that one package was consigned to the United States government, one to Mr. Mahan, and one to Mr. Parsons. As Mr. Langstroth was present, and Mr. Robinson was not there at all, and for other good and sufficient reasons, I rather think we had better give Mr. L. credit for stating the truth about this matter.

7. Mr. Parsons had only two Italian queens in the spring of 1860. In the spring of 1861 Mr. P. advertised in the American Bee Journal that he would mail a circular in regard to the Italian bee to all who applied with stamp, in which would be found testimonials as to their superiority over the black variety from Messrs. Langstroth, Kirtland, Brackett and Baldridge, "when the facts were that neither man had an opportunity to see a working colony of Italian bees."

Now the foregoing seems to have given this "Italian bee historian" a deal of trouble, and he evidently thinks he has now not only cast reflection on Messrs. Langstroth, Kirtland, Brackett and Parsons, but also upon the writer—the party who then lived in the "far West." Now the fact is, all the parties whose names are given, had more or less Italian bees in 1860, and from the Parsons' importation, too. I got Italian queens as early as June, 1860, from Mr. Parsons, and when I sent in my report, Oct. 25, 1860, I had eleven (11) colonies of Italian bees. In fact on that date I had two (2) colonies, as my report shows, that had no native bees among them. I also know that the other parties named had enough Italian bees when they made their reports to Mr. Parsons to state certain facts about them. We stated nothing that any one should be ashamed of. I have still in my possession one of the circulars to which Mr. R. refers, but I have no space here to quote from it what any one of us said about our experience with the Italian bees. But I have said enough to show that Mr. R. makes a misstatement, malicious or otherwise, when he asserts that none of us had ever seen "a working colony of Italian bees." And, as for my being a resident of the "far West," Mr. R. knows better. He knows very well, unless his memory has betrayed him, that in 1860 I was a resident of western New York, and that my postoffice address was Middleport, Niagara county. I will also add that the Parsons' circular referred to is dated Jan. 1, 1861, and not in the spring of that year.

8. Prof. Riley says on page 208, American Bee Journal, 1893, that the Italian bees brought by Mr. Hermann for the United States, and as agent for S. B. Parsons, arrived in May, 1860, "and he quoted from the government records."

Prof. Riley is a man who would not misrepresent a historical fact knowingly. I do not think he got his data "from the government records," Mr. R.'s statement to the contrary notwithstanding. I am advised that his data were supplied him by another party who was evidently misled in regard to the matter. There is no record anywhere, that is reliable, to show that there were ever any Italian bees, consigned to the United States from Italy, that landed in New York in *May*, 1860.

9. Mr. Langstroth found on his arrival at Mr. Parsons' apiary, in the spring of 1860, one Italian queen alive in a hollow log. Afterwards, April 19, 1860, Mr. L. found another Italian queen alive in a cigar-box, in the package consigned to Mr. Parsons from Italy, and he treats the consignments as one shipment.

Oh, no! Mr. L. does nothing of the kind. This is simply nothing more nor less than one of those "unreliable misstatements."

To conclude: It is now pretty generally admitted that Mr. Langstroth is the peer of any bee-keeper living, whether in Europe or America, and the fact may yet dawn upon the bee-keeping world that Mr. Parsons, who has been so maliciously misrepresented by Mr. Robinson, is the peer of Mr. Langstroth.

M. M. BALDRIDGE.

St. Charles, Ill.

The Sunny Southland.

CONDUCTED BY

MRS. JENNIE ATCHLEY, BEEVILLE, TEX.

Report of the Southwest Texas Bee-Convention.

BY F. A. LOCKHART, SEC.

(Continued from page 134.)

THE MOST PROFITABLE RACE OF BEES.

Question No. 16.—Which is the most profitable race of bees to keep?

Mr. Graham—Italians.

Mr. Lockhart—For me and my location, Carniolans. Some find fault because they can't find the queens readily. I have 50 colonies of 5-banded bees, and I can find a Carniolan queen as easily as the 5-banded.

Mr. Theilmann—I prefer Italians.

Dr. Marshall—I prefer Italians.

Mr. Bankston—I prefer the 5-banded Italians. I have tried blacks, 3-banded, and most other races, and the 5-banded are my bees.

Mrs. Atchley—I believe the Italian bee will go farther for honey, and gather it from deeper flowers, than any other race of bees. It has been said that some one made a test by filling a tumbler full of honey and stretching a piece of cheese cloth over it, and the Italian bee reached honey the longest. I think it is going to be a close race the next few years between Carniolans and the 3 and 5 banded Italians.

Mr. Theilmann—I found bees working on red clover, and as some say Italian bees can gather honey from red clover while blacks cannot, I will say that I did not see any difference. But I think Italians will go farther, and hold out longer than the black bees. All in all, I should say Italians are the most profitable bees to keep.

Mr. Flornoy—If it be two races only that is meant in this question—blacks and Italians—I will say that I would not give one Italian colony for three of black bees.

Mr. Graham—When we look at this question from a money stand-point, I think there is no doubt but Italians are ahead of blacks, although it is said that black bees cap their honey whiter than Italians. But Italians gather more honey.

Mr. Lord—I think in a test case we should compare extracted honey to see if there is any difference in the honey, as the Italian bees do place the capping right on the honey, giving the comb somewhat the color of the honey; but this alone should not be a serious objection, because the Italians are only trying to give good measure, while the blacks are a little short, and when a customer is schooled in this it will make no difference. I say Italians.

Mr. Victor—I favor Italian bees first, last, and all the time.

Mr. Lockhart—This is the point I have in favor of Carniolan bees: They will gather as much as Italians, and cap it as white as blacks. I will say Carniolans.

WHAT ABOUT PATENTED HIVES?

Question No. 17.—Are there any patents on hives to-day that cover any essential points in the best method of managing bees or getting more honey?

Mr. Graham—I believe it is now pretty generally understood by bee-keepers that *all* patent hives are humbugs.

Dr. Marshall—I think the main thing to do is, to do away with everything that don't pay, whether patented or not.

Willie Atchley—While we are talking about patent hives, I wish to relate a little incident that occurred while Mr. Hanna and I were out hauling bees some time ago. We met a patent hive man, and I began to question him. He told me he was getting a barrel of letters from A. I. Root, wanting to buy his patent, etc., and very soon I began to wind him up on

that point, and he wound up very short with, "Look here, young man, you are too d—— young to learn me anything about bees?" We marked him down a frand, and went our way.

NATURAL VS. ARTIFICIALLY-REARED QUEENS.

Question No. 18.—Are artificially-reared queens as good as natnral queens?

Dr. Marshall—I have had some queens that were short-lived, and sometimes I thought likely they were not reared right. But as bees are subject to man, I think likely that just as good queens are reared by the latest improved methods. Qneens sometimes get injured in the mails,and maynot lay well.

Mr. Bankston—I have a littlo experience in qneen-rearing, and I find that when we take an egg, or only a few hours' old larva, to rear queens with, and place the cell-cups in strong and prosperous colonies, there is no difference in the length of life or vitality. I do not know so well about queens being injured in the mails, as I have had queens sent me from Italy by mail, and they would lay and do as well as any queens. But some may get injured in transit.

Mr. Lockhart—We have new qneen-breeders springing up every year, and they think they understood all about the bnsiness when they do not, and rear queens that are short-lived and an injnry to the honey-producer and queen-rearer also. I never had but one man say I reared queens that were short-lived, and that was Mr. Quigley. He may have been mistaken. I am of the opinion that queens properly reared, either artificially or otherwise, are all right.

Mr. Victor—All the queens I have ever gotten by mail were good, and I do not know how they were reared. I do not think they were injured any by being sent by mail. I am no queen-breeder, therefore I have but little experience, as I know it is a trade separate from honey-producing.

Mr. Bankston—I know that some good queen-breeders rear some sorry queens. I do myself, and I think I am getting pretty good at it, but I am learning more and more every year, and have been at it five years now.

Mrs. Atchley—I am satisfied that short-lived queens are caused more by the queen being reared from a larva too old, than from any other cause, and I have given this matter serions thought for the last few years. Just think of the queen-breeder holding the reins of the honey-producer, and I tell you there is room for serious thinking when the weight of such responsibility is resting upon the breeder, as a lot of poor queens may destroy the honey crop of the producer, and be a great loss to him. I would suggest that all queen-breeders should be over particular in rearing and selling queens. I have tested the matter of natural and artificial queens, and find no difference, when the qneens are properly reared.

Mr. Theilmann—As I am no queen-breeder, I will not attempt to say which is best, if any difference at all. But I wish to say that while we are talking about queens, that I have seen it mentioned that it injured queens to cage them when they were in full laying condition. I had a good chance to test that matter at the beginning of my honey-flow, and while the queens were in full laying condition I killed all the queens, except a few of the best ones, and these I caged for 20 days, and then turned them loose again, and they were just as prolific as ever, and it did not injure them.

Mrs. Atchley—Yes, it is said by Doolittle and others, that queens are injured by being caged while they are in full laying plight, but I have also tested it, and find it does not hurt them.

Mr. Atchley—Laying queens, while they are full, need food constantly, and will die very soon if caged alone or without food; but with plenty of food and bees, it will not hurt them, in my opinion.

Mr. Lockhart—That is about my opinion also.

WORMS BOTHERING BEES.

Question No. 19.—Do moth-worms bother bees worse in the South than in the North?

Mrs. Atchley—I have often said, when I lived in the North, that a *bee-keeper* never had occasion to complain about moths. But I must take it back now, as that is one of our *greatest* drawbacks here in this extreme southern country. They will increase faster than the bees, sometimes.

Mr. Lord—I think some bees will keep the moth out better than others. I noticed that a colony once would go out into an empty hive and destroy the moth in the combs.

Mr. Theilmann—I find that moth-eggs are carried in by the bees on pollen. I think the eggs are laid in the flowers, and the bees gather them with the pollen. I cannot say whether moths are worse in the South.

CLOSING INCIDENTS OF THE MEETING.

At this time Dr. Marshall had to leave, tendered his thanks, and expressed his gratitude for the honor conferred upon him by appointing him chairman, and said the meeting had been a source of great pleasure to him. He appointed W. R. Graham to preside over the further proceedings of the meeting, and after a hearty hand-shake by all, he departed.

Willie Atchley was now called upon to exhibit his queen-rearing fixtures, and go through the course of rearing queens. This he did, showing how queens could be reared, dipping cells, grafting and moving the cells, and gave a full lesson from first to last, which excited the curiosity of all present.

A card was read from Dr. Miller as follows:

MRS. ATCHLEY:—I thank you for your invitation to your bee-meeting, but how could you expect me to go off so far when I've spent all my money for sugar? My! wouldn't I like to be there. All the Texas bee-keepers I have met are a whole-souled lot. There was Judge Andrews, and later Dr. Lay, then last year I met Friend Graham and Mrs. Sherman. Say, give my best wishes to the whole crowd, please.

Marengo, Ill. C. C. MILLER.

The following came from the editor of the American Bee Journal:

MRS. ATCHLEY:—Kindly remember me to all the convention, and tell them that I wish them a Happy New Year, with lots of honey in 1895. GEORGE W. YORK.

Chicago, Ill., Dec. 20, 1894.

It was then moved that we organize a South Texas Bee-Keepers' Association. This met with a hearty second, and all seemed "in for it." With W. R. Graham in the chair, the names of all were taken that wished to become members. They are as follows:

E. J. Atchley	W. R. Graham	J. M. McKenzie
Jennie Atchley	M. R. Graham	Mrs. J. M. McKenzie
Amanda Atchley	Mrs. Maggie Graham	James McKenzie
Willie Atchley	S. D. Hanna	George McKenzie
Charlie Atchley	Henry Hanna	Miss Lelah McKenzie
Napoleon Atchley	Fred Cooke	Gertrude McKenzie
Ives Atchley	Mrs Bell B. Raymond	O. H. Stevens
Thos. York Atchley	Miss Ella C. Howard	T. J. Skaggs
C. B. Bankston	Frank Hickson	Max Brauer
Page Bankston	C. Theilmann	Mrs. Max Brauer
Isaac Bankston	W. C. Gathright	Miss Hettie Thetford
W. O. Victor	A. S. Osborne	Miss Belle Thetford
F. A. Lockhart	Mrs. A. S. Osborne	Miss Annie Thetford

It was decided that we elect by ballot the officers for the next year, which resulted as follows: President, E. J. Atchley; Vice-President, S. D. Hanna; Secretary, F. A. Lockhart; Treasurer, W. O. Victor; and General Solicitor, Mrs. Jennie Atchley.

Two places were put in nomination for holding the next meeting. Beeville and Wharton were named, and the choice resulted in Wharton getting the next meeting.

A collection was taken for the purpose of having the minutes printed in pamphlet form. The Secretary was ordered to have 200 copies printed.

The convention all arose to extend their thanks and gratitude to Mr. and Mrs. Atchley, and all their family, for their kind hospitality. Such a thing was never known at a bee-convention, that a beef, a hog and a sheep, as well as a large number of turkeys, were barbecued, and the whole assembly fed and taken care of by one family, and plenty left to feed as many more. What you did miss by not being at this convention!

The convention was asked to rise and join with Miss Hettie Thetford, the organist, in singing "God Be With You Till We Meet Again." Then, with a good old-fashioned hand-shaking the convention adjourned to meet at Wharton, Tex., June 10, 1895. F. A. LOCKHART, *Sec.*

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Management for Increase and Surplus Honey.

I have 10 colonies in the 2-story 8-frame dovetail hive, apparently in good condition, that I wish to run for comb honey the coming season. We have a light honey-flow commencing in April and lasting until October, but our main flow is from basswood in July and heart's-ease in September. How

will I manage to increase to 20 colonies and get the most surplus, leaving the bees in 2-story hives in good condition for winter? G. M.

Southwestern Wisconsin.

ANSWER.—A good deal depends upon your experience and also on the season. If it's a very bad season it isn't wise for you to try to double your number. Of course you can do it, no matter what the season is, and then you may lose them all before the next spring. Very likely your best plan is to let them swarm naturally, putting back or doubling up second swarms. Or, you may prevent second swarms by the methods frequently given.

Thought it Was Foul Brood.

I have four colonies of bees, two of them having been swarms last June. About July 10 I saw symptoms of what I thought was foul brood. Some brood died before it was sealed, and some appeared to be nearly full-grown, with little holes in the capping. I took about 130 pounds of honey from the four colonies, and they were strong and full of bees in the fall, with no signs of the disease left. I have Root's "A B C of Bee-Culture." S. K. B.

Conestogo, Ont.

ANSWER.—There may and there may not be foul brood among your bees. Study very carefully your book, and be ready to examine the bees carefully when they fly in the spring. I can hardly give you any better instruction than is given in the book you have, for Mr. Root has had much experience with foul brood. From your description of the case it would be impossible to decide positively.

Carniolans vs. Italians as Honey-Gatherers.

Are the Carniolan bees as good honey-gatherers as the Italians? J. W. B.

ANSWER.—Referring to their gathering qualities alone, I suppose they're neither better nor worse than Italians.

Irrigated Land for Bee-Keeping.

What kind of a location for bee-keeping is irrigated land, in Idaho Falls, Idaho? S. O. L.

ANSWER.—Irrigated land is just as good as any other, and in one respect better, for it doesn't suffer so much from drouth. The only question is whether honey-plants in abundance are found there. Do they raise alfalfa?

Sections Pulling Apart.

I have had trouble with the sections in the lower super pulling apart when removing them from the hive. I have never had any trouble in this line until the past season. I use the one-piece sections in a Simplicity hive. I have one colony from which I took 75 pounds of fine section honey last season; this colony has not sent out a swarm in the last four years. S. W. S.

Hannibal, Mo.

ANSWER.—It is hard to tell without knowing more of the case. What kind of a super contains the sections? What is there between the top-bars of the brood-frames and the sections? And be sure to tell us more about that colony that hasn't swarmed for four years and gives good crops. What's the size of the hive it's in? What kind of bees are they? Are your other bees of the same kind, and in the same kind of hives? If they are, this is the one I'd breed from.

Preventing the Propolizing of Sections.

If sections are closely covered by a cloth over them, will that not prevent the bees from propolizing them? N.

ANSWER.—I can only answer from my own experience in such matters, and from what Geo. G. Scott says on page 34—others may have a different experience from mine. I made a pretty thorough trial of enamel cloth as a covering for sections, and I think it is about the worst thing I ever tried. The bees would push in a little glue between the cloth and the sections, that would raise up the cloth, then more glue would push the cloth still higher, until sometimes there would be a space to allow the bees to burrow between the cloth and the sections. So there would be a streak of glue along the edge, and sometimes clear across the top of the section, that would be from a sixteenth to nearly a quarter of an inch thick. I suppose it would be the same with any kind of cloth.

Friend Scott gives as a successful remedy the plan of covering the sections with a pattern slat. I can only say that with me they do the same thing as with the cloth, only the line of glue never departs far from the edge, and it does not become so thick. Bees will crowd glue in between such slat and the sections, and although the middle part of the section top is left entirely clean, the edges are so badly daubed that, on the whole, the "layer of air" is the best covering I have yet tried. If Friend Scott, or any one else, finds something that is really better, I shall be glad to hear of it. I don't say but what the slat may work all right with him, but it doesn't for me.

Enamel Cloth—Shade Boards for Hives.

1. Please describe the enamel cloth used in hives. Where and how is it used? Is ordinary table oilcloth as good? and is not "ducking" sometimes used?

2. Is it necessary, in hot weather, to put a shade or board over the hives? L. G. C.

ANSWERS.—1. Enamel cloth is something like common table oilcloth, but plain black, and not so heavy. Table oilcloth will do as well, but is more expensive. It is used to cover directly over the frames to keep the bees down. Duck and heavy sheeting are used, and almost any kind of cloth will answer for a time, especially if put on during the honey harvest or at the close thereof, so as to be well coated with bee-glue. At the present time none of these things are as much used as formerly, flat board covers coming down within a bee-space of the frames being liked better.

2. Not absolutely necessary, but it is generally better.

Simpson and Spider Plant—Pleurisy Root.

Do you know anything about the spider plant, and the Simpson honey-plant? Are they bad to spread, or hard to get rid of in case they get a start? What about the pleurisy root? M. C. B.

St. Paris, Ohio.

ANSWERS.—I have had both the spider plant and the Simpson honey-plant. In fact the latter grows wild here, but in very limited quantity. Neither of them are bad to spread. Although I gave them much encouragement, there isn't a plant left of the spider plant, and scarcely one of the Simpson honey-plant, although I had about an acre of it.

Pleurisy root is a milkweed, but the milk is only in the root. You know the milkweeds that grow cottony seed-pods three or four inches long? Well, this is one of them. It has orange-colored flowers.

Distance Swarms May Fly.

1. How far may a colony of bees fly when they leave the parent hive to seek a new home? 2. May they fly further than they may to gather honey? 3. May they fly further than queens may to mate? J. L. S.

ANSWERS.—There's no rule about it. It's a little like asking how far a boy will go after berries, only the boy may give up without getting any berries, and the bees will find some kind of a stopping-place, if it's only a limb of a tree in the open air. Sometimes, and perhaps nearly always, they may know where they're going when they start, but I think there is a belief that sometimes they start without any particular destination, and may make their journey at several stages.

2. I think they may. And they may go only a few feet.

3. I think they may.

That New Song—"Queenie Jeanette"—which is being sung everywhere, we can send you for 40 cents, postpaid, or club it with the American Bee Journal for one year—both for only $1.20. Or, send us one new subscriber for a year (with $1.00), and we will mail you a copy of the song free.

Please Remember that I am *not* a dealer in bee-keepers' supplies, so do not send to me for a catalogue, etc.—EDITOR.

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GEORGE W. YORK,
EDITOR.
Assisted by the following Department Editors:

DR. C. C. MILLER	"QUESTIONS AND ANSWERS."
MRS. JENNIE ATCHLEY	"THE SUNNY SOUTHLAND."
"GLEANER"	"AMONG THE BEE-PAPERS."
"BEE-MASTER"	"CANADIAN BEEDOM."
DR. F. L. PEIRO	"DOCTOR'S HINTS."
REV. EMERSON T. ABBOTT	"NOTES AND COMMENTS."

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Editorial Budget.

Mr. Thomas G. Newman, in a letter dated Feb. 22, wrote me: "I am laid up for repairs with la grippe again." I hope that it will not lay him up (or down) so hard as in former years. But "the grip" is not overly tender-hearted.

Mr. W. A. Pryal, of North Temescal, Calif., is "getting pictured" a good deal these days. The Bee Journal printed his phiz Jan 31, and Gleanings showed him up in its issue for Feb. 15. If Mr. Pryal is a fair sample of the California bee-keepers, they are nice folks.

On the Fence, is where Editor Root has put me beside Mr. Hutchinson, on a certain subject. All right, seeing its not made of barbed-wire. Mr. Hutchinson and I agree on most subjects, and when we can't agree we just "agree to disagree." That always keeps things pleasant between us.

Honey for Brain-Work.—A writer in the British Bee Journal has a friend, who is a well-known author, and who says:

You may like to know that my doctor told me, and I amply proved it by experience, that in doing hard brain-work there is nothing better for the work than pure honey.

It seems to me I've heard somewhere that fish also is good brain-food. What with plenty of honey and fish, bee-keepers ought all to have a good supply of non-overworkable brains.

Four Extra Pages are added this week to accommodate a few Premium and Clubbing Offers that will well repay a careful examination (see pages 161, 162 and 163). It is hoped that many of you will then go to work to earn some of the Premiums, and that others will take advantage of the liberal Clubbing Offers in renewing their subscriptions to the American Bee Journal. It is a mutual matter—the publishers of the Bee Journal want to help you, and in return would like to have you help them. Why not every present subscriber send in one or more new names at $1.00 each before April 1—before the hurry of spring and summer work comes on.

The larger the subscription list of the Bee Journal, the better the paper will be in every way. Just send on a big storm of renewals and new subscribers. If any of us get "snowed under" and suffocate here in the office, a proper notice will appear in due time. A big "blizzard" of mail will be expected in a short time.

Apicultural Literature receives a little more attention in this number of the Bee Journal, as you will see on page 149. Well, the "poor thing" needs a good deal of nursing, in some localities, if it is ever to develop into anything worthy the name of "Apicultural Literature." The following comments and suggestions from Dr. Miller are so good and to the point that I feel they should be read by everybody. It is specially hoped that the article by Mr. Hoffman, on page 149, and this from Dr. Miller, will be "honestly, earnestly, fearlessly, conscientiously and faithfully considered" by the sweet-tempered, Apollo-like essayist whose classical production was printed on page 99:

MR. EDITOR:—Apicultural literature seems to be in a bad way, judging from Mr. Heddon's essay on page 99. The trouble seems to be confined entirely to Gleanings and the American Bee Journal. Well, why not let the old things go, and instead of trying to reform them, read some of the other papers.

The editors of those two journals are such as can neither "write or select first-class articles." Bad, isn't it? And the sad part of it is that although other papers have started and given up the ghost, these two continue to live and flourish. Must be that bee-keepers rather like their writings and selections.

Some statements are a little puzzling. "The good old American Bee Journal has fallen into nothing but an echo of Gleanings." And yet everything in its columns is credited to other men. "Its editor is not a bee-keeper, having no practical knowledge of the business." And yet he keeps more bees than its editor of 10 or 20 years ago when all was lovely. Gleanings' editor is "a bee-keeper of over 20 years ago." And yet 20 years ago he was a boy in his teens, for the younger Root, a practical and enthusiastic bee-keeper, now takes care almost entirely of the matter that pertains to bees.

"Why is it more difficult to make a living out of our business now than it was 10 and 20 years ago?.....Something is wrong, and our literature is mainly at the bottom of it." So all that's necessary is to get out the old files of bee-papers of 10 and 20 years ago, read them over, and refrain from reading anything later, and then the flowers will yield just as they did then!

Marengo, Ill. C. C. MILLER.

A New Bee-Association.—On Feb. 9, the State of Washington Bee-Keepers' Association was organized, at North Yakima, Wash., with J. W. Beck as President, Chas. Lee Vice-President, Orlando Beck Secretary, L. C. Brown Assistant Secretary, and Isaac Hayes Treasurer. It started off with 11 charter members.

The bee-industry in Yakima county, Washington, is becoming an important factor in their wealth and prosperity. There is a lucrative market for honey, and probably no place in the West is more conducive to success in its development. I trust the new association will be very prosperous, and the means of spreading much helpful apicultural knowledge in that region.

Blamed the Bees!—Messrs. F. I. Sage & Son, of New York, sent in the following clipping, with this remark: "Funny bees in 'Hold Hingland:'"

THE BEES TO BLAME.—A Bristol (England) druggist, who was charged with selling beeswax adulterated with solid paraffine, pleaded that the bees themselves were to blame. It appears that English hive-owners place within the reach of the bees artificial comb foundations for making their comb. The result is honey with a decided admixture of paraffine.

That's a pretty good joke on our English bee-brethren! The idea of feeding bees "artificial foundations for making their comb!" And then, to think that should result in "honey with a decided admixture of paraffine!" Those "English hive-owners" should subscribe for the British Bee Journal, and then—read it!

Sacaline (the new plant shown on page 113) seems to be creating quite a stir in some localities. Mr. Geo. H. Eversole, of New Mexico, whom Mr. Dadant quoted, has written to the Bee Journal about it as follows, dated Feb. 21:

I send you a clipping from Farm and Home, concerning sacalina or sacaline. The people around here are nearly wild about it. It is claimed to be the greatest forage plant known, and, as its name indicates, it is a succulent plant. I have seen some seed of it, and they resemble parsnip seed. I have an idea that it is a good plant for bees, and that is the part I am concerned in. I hope you will try to find out something concerning its value for bee-pasturage, and let the many readers of the American Bee Journal know its value in that line. As it has seeds, it stands to reason that it has flowers, and the probabilities are that the flowers contain honey. GEORGE H. EVERSOLE.

The "clipping" referred to by Mr. Eversole reads thus:

Sacalina is a new forage plant that is being introduced. It is described as an enormous bearer and very nutritious. In France

it has made a wonderful record, and is highly endorsed by many eastern agricultural experimenters in this country. At the Iowa agricultural college it grew 14 feet high by June, and it is estimated that one cutting may be made every month. Once planted it stands forever, as the roots are deep runners. Like all other novelties, it should be tested on a small area before investing heavily in it.

I hope those who are interested in testing sacaline will heed the last sentence in the above quotation. It doesn't pay to go very fast on most new things. "Slow but sure" is a good motto. No bee-keeper cares to plant a noxious weed, in the hope of getting a good honey-plant. Try things on a small scale first, and then, if all is well, "wade in" if you think best.

Boys, Bees and Bear.—The following will interest the younger readers of the Bee Journal, particularly the boys:

A schoolmistress asked her class to put the nouns "boys," "bees," and "bear" into a sentence. The scholars thought intently for a few moments, when one ragged youngster, with a look of victory on his face, raised his hand. "Well, Johnny," said the school-teacher, "what is your sentence?" "Boys bees bare when they go in swimmin'." The teacher did not call on any more of her class.

Among the Bee-Papers

Conducted by "GLEANER."

WORKERS CARRYING EGGS OR LARVÆ.

Herr Reepen, the great German gleaner, sturdily opposes the idea that workers carry eggs or larvae from one cell to another, and yet he has most faithfully given all the testimony favoring such belief. He now sums up as advocates, Langstroth, Wagner, Root, Abbott, Americans; Editors Bertrand, Wathelet, French; but Germans and English seem to be absent from the list. [I have personally seen a worker carry an egg (not larva), but what it did with it I cannot be positive. I was not interested at the time, and so did not take the pains to follow the bee up.—ED.]—A "Stray Straw" from Gleanings.

HONEY-HOUSES FOR OUT-APIARIES.

Harry S. Howe reports in Gleanings that W. L. Coggshall has in each of his out-apiaries a house containing an extractor and all the things needed for use in the apiary. Saves much hauling. His nine houses cost about $30 each, are 12x16 and 8 feet high at the eaves, made of rough lumber but having good floor and foundation, so as to support the weight of honey.

HONEY AS A DIET.

A writer in Gleanings deplores the fact that honey seems to be so little used, even in the families of bee-keepers, says the price of honey is undeniably high as compared with other sweets, and sadly asks, "Will the price have to come down? and can we afford to produce it profitably at a lower price? or shall we maintain the price and limit the production to the amount consumed by those who use it only as a luxury?" Whatever may be the best answer to his questions, you may count on one thing for certain, and that is that every individual bee-keeper, just so long as he stays in the business, will do his level best to produce just as large a crop as he can.

LATE-REARED QUEENS.

H. L. Jeffreys says in Gleanings that very late queens are least likely to swarm, are the steadiest layers, live the longest of any queens, and are the strongest of any, because they are not exhausted while young, in early production. He also thinks that it is possible that a queen may be injured by being too much restricted in laying for want of room.

AMOUNT OF STORES NEEDED IN WINTER.

Doolittle says in Gleanings that after 17 years' trial he finds 25 pounds of stores for those wintered out-doors, and 20 for those cellared, about the right amount to last from October till May, or *from flowers to flowers*, that is, so that no feeding need be done in the spring. After 10 years' trial, he finds that no feeding will be needed before the first of April, and not often then, if each colony wintered out-doors has 18 pounds, and each colony in the cellar 12 pounds.

See Premium Offers on pages 161, 162 and 163 of this No.

Canadian Beedom.

Conducted by "BEE-MASTER."

Echoes of the Ontario Convention.

The editor of the Bee-keepers Review has a long, appreciative and critical notice of the Stratford meeting, from which the following paragraphs are taken:—

THE ONTARIO BEE-KEEPERS' CONVENTION.

I am just home from attending the above convention. The Secretary asked me to contribute an essay, and Mr. John Myers of Stratford, where the meeting was held, most cordially invited me to be his guest while attending the convention—in fact, I was treated as I always have been whenever I have been in Canada, as though too much could not be done to make my visit a pleasant one.

I left home about 11 o'clock at night, and, as I stood on the threshold and looked back at the bright, shining coal-fire, and the woman standing beside it with a wistful, beseeching look in her eyes that seemed to say, "Don't go," and then I looked out and saw the street and air full of whirling snow, and visions of blockaded trains arose in my mind, I will confess that it required some courage to shut the door from the outside.

Once snugged away in the Pullman sleeper I soon forgot everything until when, about five o'clock in the morning, the porter poked me in the ribs and said, "Most to Stratford, sir." If anything, the storm was worse than in the night, and I almost feared that the convention would be a pretty slim affair, but it seems that our brethren across the line, with their great fur coats, and caps, laugh at such storms. Dr. Duncan, who must be in the neighborhood of eighty, drove in some 12 or 15 miles, if I remember aright. Sometimes he had to get out and tramp and break a road through the drifts before he could get through with a team.

For genuine enthusiasm in attending conventions, the Canadians beat us. There must have been nearly 100 in attendance. Not only are their conventions well attended, but they are never dull. One thing that contributes largely to the spice of their meetings is that some of the members are very outspoken. Nothing is ever allowed to pass unnoticed or unchallenged. The least attempt at unfairness, or irregularity, or any mistake, is promptly challenged, and names are spoken and statements made with a freedom that would be truly refreshing were it not that some trifling matter is often made the basis for a long, sharp and personal debate. It should not be forgotten, however, that the Ontario Association is really a more complex affair than the associations on this side of the line! There is the grant of $500 per year that must be used to the best advantage; there is the election of officers and directors, and the appointing of a foul brood inspector; then there are the affiliated Societies and committees on this and that, and, taken all in all, there is abundant opportunity for a conflict of opinions and views, but the Association is a power for good, and its discussions of practical subjects second to none.

There was quite a little talk about out-door wintering versus cellar-wintering. All agreed that if bees could have one good flight in the winter, out-door wintering was advisable. The difficulty is in not knowing whether the coming winter will furnish this warm spell. When there are several warm winters in succession, or winters in which the bees get a flight, then out-door wintering becomes popular, while a like number of severe winters leads bee-keepers to put their trust in cellars. Many who were present said that with them there was not one winter in ten when bees would get a winter flight.

Giving bees protection in the spring after they were taken from the cellar found no supporters. It was pronounced both expensive and unnecessary. Mr. Pettit said that bees could be wintered with as much assurance of success as in the wintering of any other stock, and when pressed to tell just how it should be done he went very briefly, yet concisely, over the necessary requisites for successful wintering. Preparations must be commenced in July. Each colony must have a good queen and an abundance of good stores. The bees should be put into the cellar after there is no hope of further flights, and before the beginning of freezing weather. He placed considerable stress upon the manner in which his hives were stacked up in the cellar. The entrance extends the whole length of the front of the hive. The back of the hive is raised ⅜ of an inch from the bottom-board, and hive, bottom-board and all is tilted up until the back of the hive is three

inches higher than the front. The assertion was made that the cold air entered at the lowest opening (the front entrance) and the warm air left the hive at the highest opening (the back), thus creating a better system of ventilation than is secured when a hive is in a level position. The hive covers are not carried into the cellar, the hives being covered with quilts and cushions to retain the heat. He would have the temperature somewhat lower than the orthodox 45°, thereby securing more perfect ventilation inside the hives. Just what the temperature should be depends upon the behavior of the bees. When the bees are perfectly still they are wintering perfectly. If they are obliged to fan to get rid of foul air, or to keep themselves warm, they are wearing themselves out, and are really old bees when taken from the cellar in the spring. Anything that disturbs the bees sets them to feeding the queen, and breeding results, and that means diarrhea and death.

One very enjoyable, and I think useful, feature of this meeting was the holding of a "Honey-Bee Concert" one evening in a large hall. To this the general public was invited. There was music, the singing of songs, speaking, and Bro. Holtermann gave a lecture on bee-keeping, illustrating his remarks by pictures thrown on a screen by means of a magic lantern. Very catchy, illustrated programmes were distributed among the audience, opportunity being taken to weave into the programmes as much instruction as possible showing the value of honey as a food. The lecture and speeches were also intended to give to the public those ideas in regard to honey and bees that would be most advantageous to bee-keepers that the public should know. That genial, thorough-going bee-keeper, J. B. Hall, was made President, and I hope to be at Brantford next year and see him preside.

W. Z. HUTCHINSON.

Mr. Hutchinson is quite right in saying that there is greater freedom of speech at Canadian bee-conventions than at those held in the United States. John Bull has a tougher hide than Brother Jonathan, and rather enjoys a lively discussion. As Mr. Hutchinson says, this prevents the meetings from becoming dull, and puts a degree of spice into them. It must be admitted that a trifling matter is sometimes made an occasion for long, sharp, and personal debate, but a good chairman will not let that go very far.

Mr. Hutchinson is quite right in referring to the proper use of the government grant, as one of the causes for conflict of opinion. The feeling was strongly expressed at Stratford that too much of the public money had been spent on trips to Ottawa to secure legislation which some thought needless and useless. But Canadians have a fashion of yielding to the will of the majority, after a matter has been thoroughly ventilated by free discussion.

Mr. C. A. Ouelette, publisher of the Practical Bee-Keeper, who also carries on an apiarian supply business midway between St. Thomas and Detroit, has this to say about

THE STRATFORD MEETING:

This being the first meeting of the Ontario Bee-Keepers' Association which it has been my pleasure to attend, I am not in a position to compare it with its predecessors in this very important association, but from all reports it seems to have been one of the largest and most representative in the history of the Association. Either the location was more favorable, or the interest in the assemblies is on the increase. I trust the latter is the true reason.

The "brotherly" element was out in force. This may or may not be all right, but it certainly looks queer from a business stand-point. It seems to me that business should be conducted along business lines. It is not my business to call Brown a brother simply because he is growing a field of wheat across the fence from my own. He is my neighbor; he may be an acquaintance or even a friend, but he certainly is not my "brother." Of course these remarks of mine must be taken *cum grano salis*—I am not a brother bee-keeper; I am a business man.

I regretted to see signs of discord among the directorate and to find that the best and most prominent men were in the minority. What is the cause of this? Drive away the best men from a community or organization and what is the result? True, I admit you must give the young and new aspirants a chance to advance, but this should be done cautiously and not so as to be a detriment to said community or organization.

In corporations, organizations, societies and associations we find plenty willing to assist who have not the ability, and others who have the ability will not act, but when we find men of acknowledged ability who are willing to act, then the best interests of such community or association are preserved by causing such men, if possible, to retain their positions. Personal feelings should give way to the good of the association.

Among the essays read was one on "Education," by Allen Pringle. It is quite likely that this essay will be ignored by the bee-papers—the Review is just to hand and never mentions it. It will be ignored, not because it was not both entertaining and instructive, but on account of Mr. Pringle's ideas on the superuatural. As I understand the matter, Mr. Pringle was asked some two years ago to prepare an essay on "Education," to be read at the Association meeting, but that he never consented to do so till this year and then with the understanding that it was to have been read at one of the evening sessions or entertainments. Mr. Pringle's views on religious matters are well known, and although I, myself, with the great majority, do not think as he does, still he has the courage of his convictions, and apart from his religious opinions his wide range of knowledge, his integrity and his honesty have earned for him a wide respect and reputation. Mr. Pringle on rising to read his essay said:

"Had I known that I was to read this essay in regular session of this association, I would never have consented; and if it hurts the feelings of any of you, you must bear with me."

While not agreeing with Mr. Pringle's position on the supernatural, I must acknowledge that his essay otherwise was a masterly one and contained subject-matter for a great deal of thought, and as Mr. Pringle said, if the feelings of any were hurt they should, under the circumstances, have borne it.

C. A. OUELETTE.

Mr. Ouelette has referred in very proper terms to the one great drawback of the Stratford meeting, which was the exclusion of some of the very best members of the Association from positions of prominence in the management. The case of Mr. McKnight is especially to be regretted and censured. No man has done so much to make the Ontario Bee-Keepers' Association the power for good that it is, as Mr. McKnight. He has worked untiringly for the interests of bee-keeping in Canada, and has the respect and confidence of bee-keepers on both sides of the lines to an extent not exceeded, if equalled, by any other man within the limits of Canadian beedom. On his retirement from the office of Treasurer of the Ontario Bee-Keepers' Society a couple of years ago, he was presented, by his fellow-directors, with a handsome gold watch, in appreciation of his pre-eminent services to the association—a proud distiuction not attained by any other bee-keeper on the American continent. Mr. Ouelette well says that to drive away the best men from an organization—men who are able and willng to work for the general good—is most detrimental to the welfare of such organization, and that personal feeling should never be carried to such a length. It is to be hoped that the mistake which has been committed, and the injustice which has been perpetrated, will be corrected at the next annual meeting. Meantime, Mr. McKnight may rest assured that the rank and file of Canadian bee-keepers regard him as a good and faithful servant, who has been punished for doing his duty.

Read and Study out subjects of interest; and be ready to begin the ensuing season's work promptly, with an adequate comprehension of the extent of the business to be conducted, and a just appreciation of the detail therein involved.—*Quinby.*

Queens and Queen-Rearing.—If you want to know how to have queens fertilized in upper stories while the old queen is still laying below; how you may *safely introduce* any queen, at any time of the year when bees can fly; all about the different races of bees; all about shipping queens, queen-cages, candy for queen-cages, etc.; all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know—send for Doolittle's "Scientific Queen-Rearing"—a book of over 170 pages, which is as interesting as a story. Here are some good offers of this book:

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Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Best Thing to Brush off Bees.

Query 961.—What is the best thing with which to brush bees off a comb?—Calif.

W. G. Larrabee—The bee-escape.

G. M. Doolittle—I always shake the bees off.

P. H. Elwood—A Coggshall bee-brush, it is said.

Jas. A. Stone—I have always used the wing feather of a turkey.

R. L. Taylor—I use a large quill from a turkey's wing, but I don't know what is best.

Wm. M. Barnum—The "Yuba (plant) brush." A fine turkey-tail feather will answer.

Prof. A. J. Cook—A turkey feather is good. The brushes sold for the purpose are excellent.

Mrs. L. Harrison—I prefer asparagus, for if it gets sticky I can get fresh, and it costs nothing.

Chas. Dadant & Son—Asparagus tops or very soft vegetable brushes. Ours are always home-made.

Mrs. J. N. Heater—I use a yucca brush, or whisk broom, though there may possibly be something better.

Eugene Secor—I don't know. I never used everything. Asparagus tops are the best thing in reach of me.

Dr. J. P. H. Brown—A young peach sprig; next, a tuft of long grass. Animal substances are objectionable.

E. France—I go to the broom-makers, and have made to order, out of very fine corn, a very thin brush-broom about 6 or 7 inches long.

B. Taylor—A single stiff feather from a turkey's wing is what I use, and I know of nothing better. Bee-escapes are the best for general use.

C. H. Dibbern—I have never found anything better than a small wisp broom made from the green stems of blue-grass, and they cost nothing, either.

Rev. M. Mahin—About four or five small heads of broom-corn tied firmly together. The heads of broom-corn should be quite small and of uniform size.

J. E. Pond—Anything that will brush them off without injuring them. I have used with success a soft broom brush, and do not think anything *better* can be found.

Dr. C. C. Miller—If no regard is to be taken of convenience or durability, a big bunch of asparagus, or some kind of weeds, tied together. For a brush to be always ready, Coggshall's broom.

Mrs. Jennie Atchley—I don't know what is the best thing. I use a brush made of corn-shucks torn to shreds and tied to a flat handle or paddle, and this suits me best of anything I have tried.

H. D. Cutting—The best thing I know of is a good, strong shake in the right direction. If you must brush, I cannot say what is *best*. A wing from a fowl is good; a stalk of broom-corn I found a help.

J. A. Green—One of the stiff feathers from a wing of a goose or turkey, with about half the feathered part cut away. A brush made of good hemp or sisal fiber is also excellent, and for quick work superior.

Rev. Emerson T. Abbott—I do not know. I have never found anything that I thought was very good. However, since I come to think of it, I do not brush them. I just let them *walk* off through an escape.

G. W. Demaree—I have tried nearly everything, and I now use a light brush-broom made of the finest broom-corn, and like it best. We have a species of "tongue grass" in this locality, which, if cut and dried at the right stage, makes the best bee-brush that I have used.

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Headquarters in the United States for all varieties and sizes of Hardy Nursery grown evergreens and ornamental trees. Prices the lowest. Six $5.00 and $10.00 bargains. Over ten million evergreens and a large stock of other trees. Illustrated catalogue free. I want a good Local Agent.

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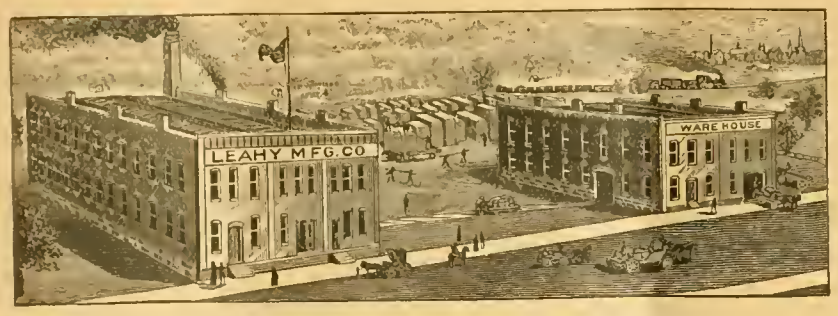

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MRS. ATCHLEY:—The 19 1-frame Nuclei I bought of you last year with Untested Queens, gave me 785 lbs. of section honey and 175 lbs. of extracted honey, besides some unfinished sections. The best one gave me 120 one-pound sections well filled.

Heber, Utah, Oct. 9, 1894. J. A. SMITH.

Now, didn't I tell you it would pay to ship Bees north to build up and catch the honey-flow? **Bees by the Pound,** on a Comb and Honey to last the trip—$1.00; 10 or more Pounds 90c. per pound. **NUCLEI**—$1.00 per Frame; 10 or more Frames, 90c. each. Untested Queens to go with them [same as Mr. Smith got] 75c. each.

UNTESTED QUEENS—by mail, either **Leather-Colored Italians, 5-Bands,** or **Carniolans**—$1.00 each; $5.00 for 6; $9.00 per Dozen—till June 1st., **then** 75c. each; $4.25 for 6, or $8.00 per Dozen.

TESTED QUEENS—**3-Bands,** $1.50 each; **5-Bands** and **Carniolans,** $2.50 each. **Fine Breeders,** of either race, or **Imported Queens,** $5.00 each. My **Straight 5-Band Breeders,** $10.00 each.

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Doctor's Hints

By DR. PEIRO, Chicago, Ill.

The "Grippe."

Did you ever have it? I am glad you haven't, but if you should be visited by this subtle caller, you will never forget the impressions he leaves in his wake. Perhaps an introduction to the Grippe's methods may prepare you for his advancements, and enable you to extend a less friendly greeting than is your usual custom to visitors of whose objects you are less informed.

He approaches you very gently, does the "Grippe"—simply extends a chilly hand at first until he has gained admittance into your system, then he proceeds to make you feel very uncomfortable—"creepy" all over.

The chills chase each other all up and down your back, playing hide and seek around your ribs. Then the knees begin to jar and tremble, the hands shake, and your stomach feels "gone"—for all the world as if you were about to have a real, old-fashioned "chill" late in the fall! Well, but this is only the beginning. In 24 hours—may be less—your pulse comes up, indicating a little fever—just enough to keep the whole system stirred up. Pretty soon you'll have a headache, a tightness in your chest, perhaps some cough, maybe your bowels incline to looseness, and maybe not—this cold-blooded infliction doesn't serve everybody just the same.

Well, within 48 hours you simply feel bad all over! Hardly sick enough to go to bed, and not well enough to stay up. All you know is that you feel shiftless and cross, and want to go somewhere and hide yourself.

Well, now if no complications occur (lung fever is most likely), why, you can shake off the Grippe comparatively easy. Absolute quiet in a warm bed, not a thing to eat for 24 hours, and only hot buttermilk to drink—all you want of it. After that time toast, with the yolk of a soft-boiled egg three times a day is permissible. You see, Mr. Grippe is like any other selfish visitor, if you don't feed him pretty well he gets mad and leaves you. And, of course, that's just what you want!

In a few days you will be quite able to resume your regular work and diet. But neglect these precautions, and results may be decidedly serious!

Cold Winters.

It a mistake to suppose that the coldest weather is the most healthy, that during extreme winters the least sickness results. Statistics and personal observation entirely refute this old notion. Indeed, we may trace the most violent and fatal epidemics occurring during the intensest cold seasons.

It is in the very cold winters that diphtheria and scarlet fever assume their most virulent forms, and thousands die from pneumonia and other lung diseases. Moderate seasons are usually the healthiest, and the diseases that do occur are mild in form, and seldom of a fatal nature.

Honey & Beeswax Market Quotations.

CHICAGO, Ill., Feb. 7.—The weather has been so cold that it prevented the shipping of comb, and the trade has been light to local dealers. Choice white comb sells at 14@15c. There is demand only for that put up in excellent shape. As a rule, dark grades are slow, prices ranging from 9@10c.; good, light color, 12@13c.
Beeswax, 27@28c. R. A. B. & Co.

CHICAGO, Ill., Dec. 27.—Up to the present the sales on honey have met with our expectations. We have received considerably more honey than we figured on handling, owing to the short crop report, and we think the early shippers reaped the benefit. However, we are now getting the average price, viz.: Fancy, 15c.; white, No. 1, 14@13c. Extracted, 6@7c.
Beeswax, 28@29c. J. A. L.

CINCINNATI, O., Feb. 20.—Demand is quiet for all kinds of honey. Best white comb honey sells at 14@16c. in the jobbing way. Extracted, 4@8c.
Beeswax is in good demand at 23@28c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, Mo., Jan. 7.—The demand for both comb and extracted is light. Supply good. We quote: No. 1 white comb, 1-lbs., 14@15c.; No. 2 white, 12@13c.; No. 1 amber, 13c.; No. 2 amber, 10@11c. Extracted, white, 6@6½c.; amber, 5@5½c.; dark, 4½c.
Beeswax, 22@25c. C. C. C. & Co.

PHILADELPHIA, Pa., Feb. 15.— Comb honey is very plenty and slow of sale at 12@13c. Extracted in fair demand at 5@6½c.
Beeswax scarce at 30@31c. W. A. S.

BUFFALO, N. Y., Jan. 21.—The honey market is very quiet. We quote: Fancy, 13@14c.; choice, 10@12c.; off grades moving slowly, trade being only on fancy; buckwheat slow at 8@10c. Extracted very dull, at 5@6c.
Beeswax, 28@30c. B. & Co.

NEW YORK, N. Y., Feb. 20.—We are gradually working down our stock of comb honey, and the indications are that we will succeed in disposing of all of the white honey and possibly all of the dark during the spring, at following quotations: Fancy white, 1-lbs., 12c.; fair, 10c.; buckwheat, 8@9c. The market is well supplied with extracted honey. Demand is fair for choice grades, while common stock is neglected. We quote: White clover and basswood, 5½@6c.; buckwheat, 5@5½c; Southern, 45@55c. per gallon, according to quality. Beeswax firm and in good demand at 30@31c. H. B. & S.

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174 South Water St., Chicago, Ill.
REFERENCE—Metropolitan National Bank, Chicago.
6A13t Please mention the Bee Journal.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

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R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 28 & 30 West Broadway
CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.

Kansas City, Mo.

CLEMOMS-MASON COM. CO., 423 Walnut St.

Buffalo, N. Y.

BATTERSON & CO., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

Philadelphia, Pa.

WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

General Items.

Best Year for Honey.

Bees are wintering tiptop in this locality, in the cellar so far. Last year was the best for honey in many a year. I have lived in this county 29 years, have kept bees 25 years, and in all those years I never knew bees to bring in honey in such quantities, and for so long a period—mostly gathered in the month of September. The honey was of a superior quality. We use shallow frames, and 8 of them in a hive. We are expecting a large honey-flow the coming year, as the country has been burned over, and in the burnt districts wild flowers will be in abundance. L. ALLEN.
Loyal, Wis., Feb. 15.

Late-Reared Queen.

I have experienced exactly the same as W. J. H., on page 22. I bought a colony of bees at a sale five years ago, and they never swarmed. The were in the Falconer chaff hive, and died. One year later I cleaned up the hive to introduce a new colony, and could not. Trying to put them in at the entrance I got all in but a few, and finding the queen running to and fro, trying to get in and could not. On examining the hive-entrance, I found it to be but 3-16 of an inch, which excluded the queen, of course. If W. J. H. will examine his hive, he may find it in the same condition as I did. If you should find your colony queenless, get a good Italian queen and introduce early in the spring. A. M. SENFF.
Kochs, Ohio.

Fears the Very Cold Weather.

I got last season 1,000 pounds of comb honey, and sold nearly all at 15 to 20 cents per pound. I put in 34 colonies in good condition for winter. They haven't had a flight since the middle of December. This has been a very cold winter. The mercury dropped to 24 degrees below zero almost every morning for over a month. It is 10 degrees below this morning. I am getting a little uneasy about the bees' too long confinement. Such cold weather is dangerous. If such weather contines much longer, there won't be very many bees next season.
G. W. BELL.
Bell's Landing, Pa., Feb. 12.

The Past Season in Colorado.

I have for some time intended to report my success with bees the past year, but have been hitherto prevented by sickness and press of business.

Last spring I built the shell of a house, and in the fall I had it plastered and finished off—doing my own carpenter work. And so I have had but little time for writing. I am located on Lincoln Park, just across the river (the Arkansas) from Canon City. This park is mostly set to orchards and small fruits. Tens of thousands of fruit trees are in bearing within the reach of my bees. Then there are large fields of alfalfa, beginning within about a quarter of a mile of my yard, and extending for many miles down the river, on both sides. Besides this, the Rocky Mountain bee-plant grows profusely on all vacant spots and waste places about me.

I started in with 24 colonies in the spring, and increased to 36, besides losing an unknown number. I took 1,200 pounds of choice comb honey, besides having about a dozen hives filled with new comb to supersede a lot of old combs in the spring. Of course, these are all filled with choice white honey. My hives were all well filled for them to go into winter quarters. Two of my best colonies gave 184 pounds each, during the season, and I think others would have done as well if I had discouraged swarming as I might. But I want increase as badly as honey at present.

This year, if spared, I want to get an extractor and see what can be done building up a trade in extracted honey in our market. The honey market has ruled very low here the present season—much of the crop going into the hands of dealers at 9 to 10 cents, by the ton. I think if I am fortunate enough to have a crop to market the coming year, I shall know more about how to get money out of it than heretofore.

We are having a very mild winter, and as far as anybody, except Sam Wilson, can see at present, we have a fair outlook for a good honey crop the coming year.
L. J. TEMPLIN.
Canon City, Colo., Jan. 25.

Report for 1894.

I commenced in 1892 with one colony of bees, and have now 32, which produced me 1,800 one-pound sections of nice, white honey in 1894. DAN CLUBB.
Monson, Calif., Feb. 13.

Honey a Total Failure.

Honey was a total failure in this section last season. I didn't get a pound of good honey from 15 colonies of bees. I had to feed them for winter. H. RATH.
Hagerstown, Ind., Feb. 17.

A Most Severe Winter.

We are having the most severe winter we have had in 10 years—zero weather is the rule nowadays—20 degrees below is the lowest we have had it here. My 43 colonies, on the summer stands, are well packed in chaff and sawdust, with a snowbank over all. The 10 colonies in the cellar are quiet, and appear to be all right.
Clayton, Mich., Feb. 13. C. A. HUFF.

Not Robbing—Only Flying.

At one time last spring, on a warm day, I was sure my bees were being robbed, and it is needless to say of course that I did every thing I could think of, and finally decided to let things go. But just about that time the American Bee Journal arrived, and on looking through it I found a note on robbing, stating that beginners were apt to think that their bees were being robbed when only the young bees were taking their flight, and described the appearance of things. I at once ran out to my yard, and behold, I had an extensive crop of young bees trying their wings, instead of a quarrelsome mess of robbers! This I could see at a glance after being informed, as a young bee always turns around and faces the entrance when taking her flight. N. T. SMITH.
Weston, Ohio, Jan. 28.

Some Queer Notions, Etc.

A neighbor recently asked me if there was a secret organization among the bee-men similar to the unions, combines or orders of other pursuits. He has no bees, but has been reading some old numbers of the American Bee Journal and Gleanings, and noticed that the correspondents addressed the editors as Bro. York, Bro. Root, and Bro. Miller and Bro. Doolittle, and one in referring to Mrs. Atchley had the impudence (in his opinion) to speak of her as "Jennie." Does a man have to be blindfolded and climb a greased pole in order to become a bee-man?

Another neighbor, the most practical and the most successful bee-man in this county, said he had noticed all his life that those interested in apiculture were naturally good and religiously inclined; that it took one of a gentle and forgiving disposition to become interested in the business, and I have noticed in a great many of the articles in the bee-papers this idea will crop out, that all bee-men are strictly honest. In a recent copy of the Bee Journal Dr. Gallup says all bee-men in California are honorable men. Is this true? My observation has led me to believe there are just as many

swindlers and *tricky* men among them as in any vocation, and that they will, and do, misrepresent about the fine qualities of a certain strain of bees, just as some farmers will about their horses. Don't you know there are hundreds of "tested" queens sent out every year that were never tested?

I am a novice in the business, but I am very much interested in it, and I believe we have a superior country here for bees. I have never heard of foul brood, bee-paralysis or moths in this section yet, but I have frequently heard of enormous yields of honey. The honey-flow is just as certain as the alfalfa blooms—to say nothing of the honey that is gathered from the orchards, sage and wild flowers. Alfalfa is our main dependence, though, for honey, and it lasts from about June 20 to late in September.

When a swarm absconds, they generally locate in some deserted coyote or badger den in the ground, or in some rocky bluff. There are no trees on the surrounding hills here but juniper, and few of them are hollow.

The American Bee Journal is the best periodical I have seen devoted to bees, but I firmly believe I could live without it, and at the same time have a super filled occasionally with alfalfa honey. One item in a recent number, telling how to have sections filled after the honey-flow ceases, is worth more to me than the year's subscription I paid. JNO. NAPTON.

Westfall, Oreg.

Queenless Swarm—Hiving Bees.

My father takes the American Bee Journal, but I was not interested in it until I found the editor would let the boys write. So I will try and give a part of my experience with a queenless swarm. The queenless colony that I spoke of in my last, became queenless while being hived. They came out several times, but did not cluster either time. One day they came out but kept flying. When we found they were going back, we moved the old hive away and put a new one in its place. When the bees came back they went in, having no other place to go to. So not having a queen to lay eggs, they soon died from my carelessness in not having looked after them.

In hiving we use a box made of slats, on a pole 5 to 15 feet long. When the bees are alighting in a tree, we put the hiver under them and shake them off into it, and then set it near where those that are flying can find it, but if on the ground we set the hive among them, and they run into it.

It has been so warm here that all of our bees have been flying in the middle of the day, until the last few days when it began to storm. Our bees are hardly ever shut up more than a few days at a time.

I would like to hear from more bee-boys. I am 12 years old, and go to school every day there is school. ROY ADAMS.

Longmont, Colo., Feb. 9.

More Youthful Experience.

I will write you another letter and let you know I am not froze up, if it is cold up here. We are having a cold snap—it was from 30 to 40 degrees below zero a few mornings, but I think our bees are all right. I am a little sick this week, and so I could not go to school, but I am able to read and be around.

In answer to Roy Adams, I will say that father and I have our bees together. I have had bees of my own several times, but they were sure to get mixed with the rest when they were taken in and out of the cellar, and I was generally at school and couldn't keep track of them unless I had them marked. I have all the honey I want anyway, so I don't try to keep them separate, as it bothers pa in extracting and at swarming-time.

Next season, if I am not at some school, I think I will try taking care of the bees and garden instead of cultivating corn. Father almost always extracts all his honey, but I'm going to try to get the premium next fall on comb honey at the County Fair, if I take care of the bees.

The boys that live down South had better look out, as they are talking about getting "basswood sprouts" to plant. We boys up here know what they are, if we get into mischief. They grow around stumps up here, and are slim and tough, and my! how they hurt when applied in the right manner! We bind corn-stalks with them.

I would like to have some of the boys and girls tell about "how they hived their first swarm of bees," or how they captured a "bee-tree," or some of their experience with bees. CHAS. W. SANFORD.

Ono, Wis., Feb. 12.

Bees in Weak Condition.

Bees are in weaker condition than I have seen them in many years. They quit breeding unusually early, on account of the dry season of 1894, leaving but few old bees to survive the winter. From reports ⅞ of the bees of this county are dead or starved.

M. H. MENDLESON.

Ventura, Calif., Feb. 11.

An Experience with Bees.

I started in the spring of 1892, buying one colony of black bees in a box-hive. I got no increase and no honey the first season. The spring of 1893 I sent for one full colony of Italians, and got them June 3, in good condition. Having their hive full by July 3, I divided the colony, giving each 4 frames, and the queenless part an untested queen. Then I had two good colonies of pure Italians in dovetail hives. The one colony of blacks, in a box-hive, swarmed the second year on June 18. I divided it July 14, giving an Italian queen to the queenless half, and have now 3 Italian and 2 black colonies, and 15 pounds of surplus honey the spring of 1894. The first Italian colony filled 76 pound sections, and did not swarm. The black colonies were Italianized, and all are in 8-frame dovetail hives. I had last fall 125 pounds of comb honey, and 10 colonies of pure Italian bees heavy with honey.

To-day (Feb. 15) two colonies are dead, with the hive nearly filled yet with honey. The bees froze to death.

PAUL WHITEHEAD.

Hobbie, Pa., Feb. 15.

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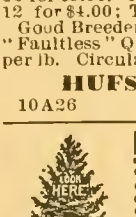

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Convention Notices.

MINNESOTA.—The regular semi-annual meeting of the Southern Minnesota Bee-Keepers' Association will be held on the first Monday in May, 1895, at LaCrescent, Minn. All bee-keepers invited. E. C. CORNWELL, Sec.
Winona, Minn.

UTAH.—The Utah Bee-Keepers' Association will hold their semi-annual meeting on Thursday, April 4, 1895, at 10 a.m., in the Fish Commissioner's rooms in the new city and county building, Salt Lake City.
Provo, Utah. GEO. E. DUDLEY, Sec.

WASHINGTON.—The next meeting of the Western Washington Bee-Keepers' Association will be held on Monday, April 8, 1895. Subjects of interest to bee-keepers will be discussed. Bee-keepers are invited to attend.
Tacoma, Wash. L. D. LITTOOY, Sec.

TEXAS.—The Texas State Bee-Keepers' Association will hold its 17th annual convention at the apiary of W. R. Graham, in Greenville, Tex., on Wednesday and Thursday, April 3 and 4, 1895. All interested are invited to attend. "NO HOTEL BILLS."
Ft. Worth, Tex. DR. WM. R. HOWARD, Sec.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association on March 16, 1895, at Goodno's Hall, in Bronson, Bourbon Co., Kans. It is the annual meeting, and all members are requested to be present, and all bee-keepers are cordially invited. J. C. BALCH, Sec.
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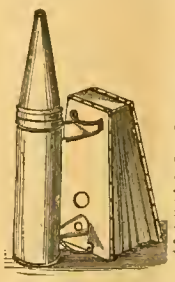

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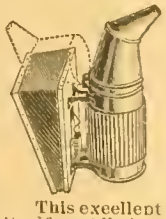

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35th Year. CHICAGO, ILL., MARCH 14, 1895. No. 11.

Contributed Articles.

On Important Apiarian Subjects.

Planting the Basswood or Linden.

BY R. S. RUSSELL.

As this most beautiful and useful tree is being recklessly slaughtered in every locality of our country by the thoughtless, and is rapidly becoming extinct in many places, it seems that some means must be speedily adopted to perpetuate and protect it if it is to live outside of history. Its vastly superior qualities for so many uses make it the favorite of the factories that send their agents *en masse* to hunt it down, and as it does not make a lasting rail or post, it is purchased of the farmer very cheap, and delivered to the slaughter-house. But what

American Basswood or Linden.

are we going to do about it? This is a free country, we are told, and that "money talks;" and that syndicates, pools and monopolies have equal rights to liberty and the pursuit of happiness, and have a right to take the earth if they can buy or corner it. Thus it is seen we need not expect government protection for the linden, but must look in another direction for the desired remedy.

My own experience prompts me to advocate object lessons as the very best step to be taken, and no person will ever regret having tried the experiment. I will tell why I know so. Just three years ago I put out 80 rods of very thrifty trees, 15 to 18 feet high, and 33 feet apart, in a straight line, for partition fence between my woods, pasture and cleared land; also a few nice ones in the front yard, orchard, and barn lot.

Mr. D. E. Merrill—See page 173.

The next year a lot more were put in vacancies in my woods, and this year another fence, and some nice ones in my lawn, and I must say the result is most beautiful to behold, both in spring and summer, and is the admiration of the neighborhood.

The first planted trees are from 3 to 4 inches thick at the ground, and over 20 feet high. Their straight, well-sloping, heavy bodies, and small neat tops, make them just right for fence posts, and good shade for stock in summer, and windbreaks in winter. In June this fence is most beautiful, being a mass of richest flowers, dripping with honey and swarming with bees, and any one passing at this time will be at once attracted by the sweet fragrance of the air, with its unparalleled aroma; and if he is not dead to the charms of the beautiful, he will ponder long at the sight, and never again will he doubt that the linden is entitled to first position as the most beautiful tree of America.

There are several varieties of linden here, varying from one to over two weeks in the date of bloom, making a successive honey-flow for over three weeks, all of which I have tried to secure in my planting, which now numbers about 200, valued at over $1,000. My object in planting the first was experimental, little thinking others would notice my nonsense, but imagine my surprise when I saw many of my neighbors, who did not keep bees, hustling far and near for linden trees instead of cottonwood and maples. From this I conclude we hold the destiny of our favorite in our own hands.

Let each bee-keeper, on or before next Arbor Day, have

some fine specimens growing at his home. Trim and cultivate well the first year; the second year they will bloom, and from that on the young lindens of your vicinity will be taken care of as never before. The eagle eyes of your neighbors will make the discovery that they have planted the wrong trees, and will strive to their utmost to get in line by the shortest route.

The best trees are found in second growth woodland, where the large timber has been removed about five years, and can usually be obtained for the asking. The transplanting may be done any time from fall until the leaves are out in spring. As many roots as possible should be taken with the tree, and all the limbs cut back to 10 inches, the ground well tampt and pulverized around the tree when again in position, with a good mulch on top for dry weather, and every tree will grow nicely, and should be hoed once a week the first season.

I will say in looking for the first-named trees, do not fail to notice the little one and two year olds that you are tramping over, as they are also valuable. They are easily taken up, and should be set in rows 3½ feet wide and 8 inches apart, and cultivate the same as corn. They are rapid growers, and will surprise you the first year with their beauty, and, if a fair season, they will be 5 and 6 feet high, and may be transplanted at any time. Trees grown in this manner are far more vigorous, and will produce at least twice the amount of bloom and honey of those reared in competition with other timber.

Our lives are short, yet in this we bequeath a noble example, and the greatest part of the blessing to future generations, who will rejoice at each succeeding honey harvest for untold ages to come, that they are blest with a supply of beautiful linden honey, and no doubt often bless the names of the fathers for thus perpetuating this greatest honey-tree.

Zionsville, Ind.

No. 4—Extracted Honey, and the Size of Hives.

BY CHAS. DADANT.

I think it will not be out of place here to say why I prefer large to small hives, and consider them as better for the production of extracted, or even of comb honey.

One day, years ago, I went to the auction sale of a farmer to buy a cow. This man had six colonies of bees in common boxes; the movable-frame hives were but little known at that time. The weather was cold, it was in March, and it was impossible to judge of the strength of the colonies by the flight of the bees. The hives were all small but one, which was unusually large. I stooped behind the hives, tapping upon them with my finger, and placing my ear against the box. The answer of each of the small hives was, "F-ssss." The answer of the large hive was "B-rrrrr." I was satisfied. The small hives sold for $3.00 to $4.00 each. I bought the large hive with bees for $7.25, and it was a good bargain. Bees were scarce and honey was high, at that time.

Very soon after, I transferred this colony to a 14-frame American hive, and, to fill all these frames with worker-combs, I had to add a few pieces taken from colonies that had died during the winter, which I had purchased from neighbors. The spring crop of this colony exceeded 160 pounds, not of extracted, but of comb honey, which was sold at 25 cents per pound. This first crop was sufficient to pay not only for the colony itself, but also for the cow which I had bought at the same sale.

The crop of the other five colonies, purchased by another man, amounted to nothing, comparatively. How do I explain the difference in yield? The queens of these small hives had not, during the previous season, had sufficient room to lay; while, in the large hive, the queen had room enough to make use of all her fecundity; so, while the small hives maintained but a small population the year round, the colony in the large hive kept a stronger force, wintered better, had more honey stored in its capacious quarters for spring breeding, and was at all times ready for any emergency.

This question of the prolificness of the queen has thus far been much neglected by many bee-keepers. They want cheap hives; but these small, cheap hives are comparatively dearer, just like the five small-hive colonies of the above-mentioned auction, which had cost their purchaser more than twice as much as my large one, and yielded less honey all together than my large-hive colony did.

For a number of years, I have kept an observatory hive, to watch the work of the bees, and I have often noticed that a queen could lay 6 eggs in a minute. Other observers, Dzierzon and Berlepsch, have noticed the same thing, and my experience was but a repetition of theirs. Thus a queen can lay 360 eggs in an hour, 3,600 in 10 hours. Of course a queen cannot, and does not, usually lay during more than 10 to 12 hours per day, in a good laying season, for she needs rest. The laying of the queen is very much governed by the workers, which give her more or less food, and by other circumstances, such as the warmth and the bustle of the colony. In winter, for instance, the bees are all quiet and eat only what is indispensable to sustain life and warmth. The heat is just sufficient to keep them alive, and the queen does not lay at all. But as soon as the sun warms the air, the bees fly out, coming home with more appetite. After filling their stomach, if they meet the queen, they offer her food; for this seems to be a natural custom among the bees, a token of their appreciation of the value of their mother. She accepts the food and soon begins to lay. The more honey is carried about, the more food is offered to her, the greater the bustle, the greater the laying, and she lays according to the number of bees living in the hive; since a large number of bees keep a larger surface warm, and the queen will not lay, and eggs will not hatch, in an area that is not kept warm by them. It is thus evident that a large population thrives better and causes an earlier and stronger spring breeding.

Now comes the question of the size of hives. If queens can lay an average of 3,500 eggs per day, how many cells will be needed to contain the brood of the colony, during the spring breeding, previous to the honey crop?

The egg is not usually changed into a worker-bee in less than 21 days, from the time it is laid in the cell. Then we need a number of cells equal to 3,500 multiplied by 21, or 73,500 cells, in addition to the cells that contain the indispensable provisions—honey and pollen—which cannot be less than 20,000; especially when we think that some cells must of necessity remain empty at times, as the queen can surely not find every empty cell every day. This gives us 93,500 cells as the number necessary for a good queen in a good colony.

We use a hive with large Quinby frames containing 180 square inches each, which, at the rate of 55-worker-cells to the square inch, gives us 9,900 cells to each frame, or 99,000 cells for the ten combs. This, from experience, we find is a good size, and if we had to change it we would rather increase than decrease it; for a strong colony needs more room for honey and pollen than a small colony does.

If we now figure the number of cells contained in a standard Langstroth frame, we find 7,800 cells to each comb, or 78,000 cells for a ten-frame hive. Deducting 20,000 cells for honey and pollen we have but 58,000 cells left for the queen to breed. She is therefore compelled to limit her laying to 2,800 eggs per day, or a little less. The reason why so many people favor small hives is that they have never tried large ones; most bee-keepers having considered the ten-frame Langstroth hive as a large hive; while it is what we call a small one.

The result is the opposite of what might be expected. The colony, being small, winters with more loss, has less honey in spring, the breeding begins later, the queen does not become encouraged to lay as early and plentifully as she otherwise should, and if the season has but a few good honey-yielding days the bee-keeper decides that his hive is too large. Thus we hear bee-keepers assert that the 8-frame hive is even too large, and they want to try a 6-frame brood-chamber, which would reduce each queen to less than the minimum capacity.

I have just read the last number of Gleanings, in which Friend Doolittle favors the 8-frame hive.

He says: "If a colony of bees having a good prolific queen is given 30 Langstroth frames, using but eight to start with, and adding two or three at a time, the bees can occupy them, until the thirty are all in, it will be found that such a queen will lay from 5,000 to 6,000 eggs per day during the best part of the egg-laying season, and die of old age, or exhaustion, when but 18 to 24 months old; while with the 8-frame brood-chamber she will give as good results, in comb honey, if not better, each year, and live four or five years."

I have tried Quinby hives, 32 of them, with 14 frames, having a capacity of about 139,000 cells, for a number of years. I have a few of these hives yet, and I have never seen a queen laying 126,000 eggs in 21 days, and it was after trying all these experiments that I have concluded that 10 or 11 Quinby frames were about the right number for a good queen. But if there are queens that can lay that many as Doolittle asserts, let us have them, and give them all the room they can fill during the spring months; for a queen of that kind would give us a working capacity of more than twice the average of the queens in small hives, and therefore a honey crop more than doubled. The premature death of such a queen, which Doolittle asserts would be the result of such extraordinary laying, would not worry me, and should not

worry any one, for practical bee-keepers are well aware that bees readily replace failing queens most of the time without the knowledge of the bee-keeper. Such queens would simply be a fortune for a bee-keeper with large hives.

But how is a bee-keeper with 9 Gallup frames, or 8 Langstroth frames, to discover such a marvel as a queen that is capable of laying 6,000 eggs in 24 hours, since his hive confines her to a capacity of about 2,000 eggs per day? Yet it would be a treat to find such a queen, and to breed from her, and this discovery would be of more importance than that of the five-banded bees, for is it not bees and honey that we want?

I must say that if we did not have any queens that were found to lay 6,000 eggs per day, we had none, either, that died of exhaustion in 18 to 24 months. The queens that died early, with me, were regularly those which were of poor health and poor layers, usually queens that had been in-bred too long. We used to rear queens for sale, and kept a slate on the back of each hive, and those queens that were in the largest hives made as good an average of life as the queens that were in smaller hives.

Friend Doolittle adds: "It is well to remember that all queens are not equally prolific, and while 20 per cent. of our queens would keep the brood-chamber of a 10-frame Langstroth hive properly supplied with brood to give the best results in section honey, the other 80 per cent. would not be prolific enough to do so." This shows that if Doolittle has the most prolific queens in existence, he has also some of the poorest breed, since 80 per cent. of them are not able to lay 58,000 eggs in 21 days.

On this question I wish to bring forward a very reliable testimony from one of our largest honey-producers. In Gleanings, page 45, our friend, E. France, says:

"If I had a queen that did not equal eight frames of brood during the breeding season, she is no queen for me. With our Langstroth frames we keep the lower story of eight frames full of brood, and the surplus [he keeps a two-story brood-chamber] brood-combs we make into new colonies. In that way I made 45 new colonies this year (1894) from 95 old ones, and every one of the new ones were given eight good brood-combs—360 brood-combs, or an average of nearly four combs from each queen."

Here, then, is a man who had 95 colonies, last year, that averaged 12 combs of brood during the height of the breeding season. This man made a net increase of 45 colonies from the surplus capacity for laying of his 95 queens. These 95 queens averaged, if I figure it right, 3,700 eggs each per day during the best time. This number confirms what we say in "Langstroth Revised," that it is not uncommon to find queens which lay more than 3,500 eggs per day for several weeks in succession during the breeding season. Yet it was with reluctance that we had made this assertion, for we were among the first who had noticed so great a fecundity in queen-bees.

Doolittle thinks it is better not to rear bees in large numbers before or after the time when their presence in large numbers is needed, because "we not only have the cost of their perfecting to pay for, but the cost of their consuming after being perfected, as well."

The five small-hive colonies, sold at the auction mentioned by me, were of the size preferred by Doolittle. They had not perfected too many workers when a surplus of bees was no longer needed for the honey crop. Yet, the large-hive colony, which reared and perfected a large number of bees, even after they were no longer needed for the honey crop, and which had to bear the cost of their sustenance afterwards, gave the largest profit.

Let me add that a few years ago, we transferred a large number of colonies in 10-frame Langstroth hives into larger hives, because we were tired of the uniformity with which we had to feed their bees in seasons of short crops, while many of the large-hive colonies would yield a little surplus. These hives are now piled up behind our honey-room, waiting to be split into kindling-wood. Would we have been better satisfied with still smaller hives? Hamilton, Ill.

Something Historical—Florida Prospects.

BY CAPT. R. H. M'INTYRE.

I commenced working with bees while I was Steward of the United States Hospital for the Insane, at Washington, D. C. I was so fortunate as to have the late Samuel Wagner (the first editor of the American Bee Journal) for my teacher—I think it was in 1866 and 1867. He then lived in Washington, and had an apiary in a suburb called Uniontown, just across the Potomac river from the Navy Yard. He was a patient, careful instructor, and with his help I built up a large apiary out of a few colonies, in every conceivable kind of hive. I adopted the Langstroth hive, and have never yet changed my mind as to its standing at the head.

In 1869 I came to Florida, and had quite an apiary at Daytona, on the beautiful Halifax river, but I was a few miles too far north for the mangrove. There was a man named Lewis, who kept bees at New Smyrna. It was Mr. Lewis that first found out that the mangrove was a honey-producer.

I owned the first honey-extractor used on the Coast, and one year I took about 1,000 pounds of honey. The past season there was over 200 tons taken, but the freezing killed the mangrove to the water, and it will be at least five years before it will bloom again.

I went out of bee-keeping about 12 years ago. I then made hives and frames, and reared early queens. I am vain enough to think that my work did a great deal towards starting what has since grown to be a large business.

Ill health, caused by exposure and wounds in the late "unpleasantness," has compelled me to commence with bees again. I bought 6 colonies last spring, increased to 20 in all—all fine colonies of mostly pure Italians. A few are hybrids, but I shall change them as soon as the drones fly.

The freeze has injured the honey prospect very much. My bees are bringing pollen and honey every fair day. There was not a day until Dec. 24, 1894, that they did not bring pollen, and on most days some honey.

I was a subscriber for the first volume of the American Bee Journal; it was then a monthly, not quite as large as the weekly is now. "May its shadow never grow less."

Bro. A. I. Root was in our vicinity a short time ago, but I was away and did not meet him.

Our peach trees are now (Feb. 4) in full bloom, and the bees are busy on them, but I think they get mostly pollen.

I shall be glad to answer any questions in regard to Florida, to those who send an addressed, *stamped* envelope. I am well acquainted with the Peninsular part of the State, on both the Atlantic and Gulf, as I have lived in the State 25 years.

I was Captain of Co. K., 72nd Ind. Vols., Wilden's Brigade. I should be glad to hear from any old soldier, whether he wore the "blue" or the "gray." Port Orange, Fla.

A Number of "Kinks" Worth Knowing.

BY GEO. W. STEPHENS.

Removing Propolis From Hands.—Someone asked a few weeks back for a recipe for removing propolis from the hands. I think I can answer that. I know of nothing for the purpose equal to soap and water; but there is quite a knack in doing it even with soap and water. Use plenty of soap and not much water; rub the hands together in the lather until the propolis is dissolved, then wash in the water. If any propolis yet remains, lather and wash again. The meanest kind of propolis will let go thus treated. Any soap will do, but laundry soap will accomplish the object the quickest, although it might be too strong for some hands.

Finding Queens.—If you have a queen that is wild and difficult to find, and you are anxious to interview her, instead of shaking the bees out on the ground and straining them through perforated zinc, place in the hive a queen-cage that has lately held a queen. In about an hour, or a little less, open the hive, and nine times in a dozen you will find her "adel" highness in the cage looking for a supposed rival.

Self-Hiving Bees.—A friend of mine left an empty hive sitting close alongside one with bees in it. One day he saw the bees marching from the full hive into the empty one, the queen with them. They took possession and went to work just as lively and as contentedly as if they had first clustered on a high limb. Perhaps bees could be educated to always swarm that way. Queen-breeders might take a hint from this. These were 3-banded bees.

Making Sugar Syrup for Feeding.—To make licking-good sugar syrup for feeding, put sugar and *cold* water together in a vessel and let stand 10 to 15 hours, stirring frequently. Then warm it until the sugar is all dissolved, but do not boil or let it get very hot. It will not granulate any sooner, if at all, than if it had been allowed to percolate through a flannel rag. Your wife, sister, mother, or mother-in-law, could tell you, if you would only ask them about it, that to make sugar syrup for the table as is often done, that will not granulate, they warm it up from cold water.

Cure for Outside-Clustering Bees.—In hot weather during a honey-flow, when bees ought to be at work in the

sections, but instead are loafing in clusters at the entrance, ventilate them a little by placing a ten-penny nail under the edge of the cover, and see how quickly they will go to work. It may help to warp the cover a little, but you'll get more honey. When it gets too hot in the hive the bees have to come out to get a breath of fresh air, just like people. When the field-bees come in loaded and find the rest of the family out on the veranda on account of the suffocating heat on the inside, they don't go in and unload, but remain with their sisters, and the cluster gets larger and longer until it grows cooler inside.

PREVENTING DAMPNESS IN CELLAR-WINTERING.—If your bees are in the cellar, and you see water running out at the entrance, it is evident they are not in the best condition for wintering. There should be no water dripping at the entrance. The inside of the hive is damp, and bees cannot stand the cold as well as when hive and cellar are dry. The cold air coming in contact with the warm air in the hive condenses and forms drops of water on the under side of the cover, and, when they become heavy enough, drop on the bees and run out at the entrance. Of course, you might tip the hives a little and the water would run along the cover and down at the end, but it would be damp all the same. To prevent this, fill a muslin flour-sack about half full of sawdust, chaff, or other material, and spread it evenly over the frames, first putting on an empty super or hive-body; then put on your cover over the super, but leave a crack along one side about as wide as a bee-space—just so a mouse can't get in. The sawdust being a non-conductor, the heat of the cluster will remain with the bees, but all dampness will escape up through and out at the crack. If the opening were not left, the moisture would collect in drops on the under side of the cover above the sawdust. Put sticks across the frames to hold the cushion up a little, or, better yet, leave the wood-zinc honey-board on, sealed. I have tried both ways. I also once tried sealed covers—and only once—and I never will again.

My 23 colonies are now (Jan 26) in the cellar along with the vegetables, packed as above and are quiet as kittens—comparatively few bees crawling out to die on the cellar-bottom. I see them every day. The temperature of the cellar is 26° to 45°—owing to the weather outside. But the bees are not very particular about the temperature, so they are dry.

Denison, Iowa.

Too Much "Monkey Work" With Bees.

BY J. W. BITTENBENDER.

Bee-keepers, as a rule, monkey too much with their bees, and often ruin the bees and the bread-and-butter side of the question. I am writing on this subject from experience and not theory.

In the spring of 1873, I purchased my first eight colonies of bees in movable-frame hives (Langstroth). Two of the hives contained crooked combs, so I could not remove them, and being inexperienced, and as I never saw a bee-hive opened by any one, I left them to remain so for the season. But in order to become master of the art, and being like the watch-maker—must take a bee-hive all apart and put it together in order to be a practical bee-keeper—I purchased a Quinby bee-smoker, and with part of a lady's face-veil I undertook the much-dreaded task.

My first lesson was a success, and much encouraged my enthusiasm. On this I gained much self-confidence, and felt able to make experiments. Six of the eight colonies was all I could work with, and as the other two hives contained crooked combs, and they were not very strong in bees, I did not think that they would do more than build up and be able to be ready for winter at best. I also obtained Quinby's book and Mrs. Tupper's, and subscribed for the American Bee Journal, then a monthly. By reading this morning and evening, and monkeying with my bees in the warmest part of the day, I passed the summer days very pleasantly, if not very profitably.

I had my six movable-comb hives all in good trim, and my regular work on every fine day was to open each hive two and three times a day to see whether all things were running right, and in good order. When the warm June days came, I noticed that the two colonies I could not monkey with were getting very populous, but did not stop to think or reason that perhaps I was monkeying too much with the other colonies.

But I reasoned thus: That with my assistance and management, when white clover was in full bloom we (the bees and I) would show them what we could do, as their hives only contained old rickerty rackerty crooked combs, anyhow, and we (the bees and I) had everything in tip-top condition. And as the dividing fever was running high in those days we could divide and make as many colonies as we pleased, and better ones, too, as colonies were the object those days.

The old rickerty rackerty colonies were still getting stronger; but still came the thought that they had crooked combs and the frames were all tangled up—that was the reason they looked so strong. There could not so many bees get into the hives, and they only *looked* strong.

But hurrah! hurrah! here comes a rattling large prime swarm out from one of the rickerty rackerty old hives, and in a few days out came one from the other hive. "All right" says bees and I, "we will divide, if that is the way you want to do it." So bees and I divided, although not a queen-cell in any of the six finely arranged hives. I divided them by taking half of the combs and placing them in a new hive, as in those days there was not much known about comb-fonndation, so the hives were filled up with empty frames, and the division that had no queen was left to rear their own queen. This was a great disadvantage to them.

But about this time out came the second swarm from the rickerty rackerty hives! as swarms was the object, I also hived them, as they were good-sized second swarms. But lo, and behold, how could I make second swarms from the finely-arranged colonies, already weak and puny?

Knoxville, Iowa.

[To be continued.]

Dequeening to Prevent Increase, Etc.

BY WILMER W. M'NEAL.

On page 78, under the heading, "Experience with Dequeening," C. H. Chapman tells us that, "increase can be controlled to our liking" by that method, but then puts the key back into his pocket, because—well, simply because he says he is no author.

To relate clearly, yet briefly, in writing, an experience in the bee-yard may or may not be an easy thing to do. That, however, is not the point at issue. What we want is not particularly a knowledge of a man's ability as a writer, but what he knows pertaining to the practical side of bee-culture.

The majority of us are yet a long way from having any thing like a corner on the prevention of swarms, and will hail with abundant welcome anything relative thereto. I wish Mr. C. would even tell us how many colonies figured in the experiment. Dequeening is something I never tried for the prevention of swarms. My observations along the line in question have led me to believe that swarming is taken on principally by the field bees. A persistent crowding upon the brood-combs by the young bees will result in swarming. When this younger element can be induced to move out and away from the brood-chamber, or an equivalent—the placing of a case of shallow combs under said apartment—swarming need not be looked for until the field bees are again crowded for elbow-room. I think a field bee, when loaded with honey and pollen, rarely, if ever, goes above and beyond the confines of the queen; for proof of this I cite the absence of pollen in the sections. A young bee is very timid, and will begin work much sooner if the "starter" is in the bottom of the section-box close to the bees' familiar surroundings; afterwards reversing the case, teaching them downward growth in comb-building.

FASTENING FOUNDATION.—For putting in foundation, a piece of common window-glass and a cup of hot water suits me very well; occasionally dipping the glass into the water, then pressing it against the wax before cooling.

REQUEENING AND NON-SWARMING.—Requeening early in the season scores a point in favor of non-swarming, but superinduces the bees to build drone-comb in the section.

WING-CLIPPING.—Clipping the queen's wings down to mere stubs, as far as tried by myself, is not entirely without merit.

Wheelersburg, O.

"The Giant Bee of India."

BY C. D. HOLT.

This bee was brought from Ceylon to the United States in 1891, and is distinguished from our bees by its giant size, and the manner of obtaining honey from flowers that the common bee cannot gather from. The Indian bee (*Apis dorsata*), with its front feet, and large, strong mandibles, tears open any flower that it can't reach the honey with the tongue, and gathers nectar where no other bee could enter. It is one-half size larger than the Cyprians, but gentler and easier to handle than the Italians. While they will not gather any more honey

than either of the above, yet the crosses of the giant and Italians gather more than twice the amount of any race of bees known.

The full-blooded Indian queen is not as prolific as our natives, but she and her workers live longer. The workers live through the season of six or eight months instead of two or two and a half, as with our common bee. The great advantage of this bee is in crossing. By using an Indian drone and an Italian queen, her half-breed workers partake of nearly the size of the Indian bee—their gentle dispositions, their ability to go into any flower—red clover, pea-blossoms and all—and their indisposition to swarm.

The full-bloods swarm but once in a season, under any circumstances, and you can hardly make them rear more than two young queens at a time in one colony, and but few drones. The young queens are generally fertilized in the hive, or on the ground; put a young Italian or black queen in a cage with an Indian drone, and he will fertilize her at once, and will fertilize as many as four queens before he stops.

The above is as nearly correct as I can give, but I am satisfied that this bee is of greater importance to us than any other strain or family of bees. They and their crosses don't tolerate moth or any enemy to prey on their stores.

For a more minute description of them, see special bulletin of our Agricultural Department for August, 1891, and a short notice in the report of 1893, page 201.

[Mr. Holt lives in Kentucky, and claims to have the bees which he describes. I do not believe in discouraging new things too much, but I would suggest, before anybody "goes wild" over the above-described "giant bees of India," that these bees be experimented with by a few bee-keepers like Hon. R. L. Taylor, Dr. C. C. Miller, Hon. Eugene Secor, and other equally reliable and prominent men in our ranks. It does not pay to rush after new and untried things too much, and until fair and impartial trial has been given, I would say, "go slow."

Understand me, I do not say that Mr. Holt's bees are not what he says they are—I merely suggest that they have not yet received sufficient trial to warrant bee-keepers investing very heavily in them.—EDITOR.]

Yellow Bees for Honey and as Moth-Killers.

BY J. C. BALCH.

I see the Progressive Bee-Keeper devoted the entire January number to the discussion of the five-banded bee. And while I am sorry to see so many of our foremost bee-keepers anathematizing the five-banders, if it is justly due them I suppose they will have to take it. But I do not see it in that light, by any manner of means. There are lots of things to be taken into consideration. If there is no honey to gather, yellow or black bees can't store honey; and if there is very little, or no nectar, in the flowers the black bees get discouraged, and invites the moth-miller into their home, and in a short time their combs are a mass of web and moth-cocoons, with the queen and what bees are left occupying one or two combs at one side of the hive.

Who ever saw a colony of five-banded bees with a queen, that ever let the moth-worms destroy their combs, whether there was any honey to gather or not? Why, I use my yellow bees as moth-exterminators! After the extracting season is over in the fall, I pile up the supers filled with combs in the corner of the bee-yard for the bees to clean out, five or six supers high, and cover them well, and there they stand till next May, and if they get moth-worms in them I sort them over and put them over a colony of my yellowest bees, and it is just fun to see them drag the worms out and fly away with them; and they always do their work perfectly and well.

As I said before, there are no bees, of what ever color or race, that can gather honey when there is none to gather, and it depends as much upon the bee-master, as the bees, as to the inside working of the hive. For instance, we had a good honey-flow in June, and one colony had plenty of winter stores and was in good condition. Another colony built up strong early in the spring, and May was cold and wet, and they run out of honey about May 10, the queen quit laying, the most of the brood hatched and the balance were dragged out, and when the honey-flow commenced this last colony had as many flying bees as the other one, and gathered honey just as hard, but in two weeks the hive was full of brood, the foragers were nearly all dead, and there were no bees to gather the honey; while the other one that had plenty of honey had been hatching young bees all the time, and kept up their working force and secured a good crop of honey. The bee-master says the one was a good colony and the other was of no account, when the fact is the colony that got no honey was the better, if he had given them the proper attention.

I have five-banded bees, three-banded bees, and a few hybrids, and my yellowest bees are the best honey-gatherers I have, and the best moth-killers. I have queens from L. L. Hearn, and from another firm in West Virginia, also from Kentucky and Florida, and while the Kentucky and Florida bees are a little the yellowest they are also the best honey-producers.

Bronson, Kan.

"Civilized Bees"—Proper Manipulation.

BY ALSON W. STEERS.

On page 35, Mr. Robert Pestell says: "The less bees are manipulated, particularly in the brood-chamber, the less truculent they become—most bee-keepers admit." Well, "most bee-keepers" may admit it, but I do not. Of course it depends largely upon the *kind* of manipulation.

The Italian bees that I have kept were certainly "civilized" bees. I know that "blood will tell," as well as "bring up," and my experience convinces me that it is just as true of bees as it is of "folks" I have often remarked to my friends that my bees knew me, just as well as their cats, dogs, or horses knew them, and that care and kind treatment had just the same effect on them. One colony of Italians in particular, —business bees—and beauties—I could overhaul every frame in the hive two or three times a week, and it did not seem to make the least difference in their work or actions; the field force were scarcely troubled at all in their work, and many times the queen would lay eggs in 10 or 15 cells while I had the frame in my hand, and the nurse-bees went right on with their work. I do not remember that I or anybody else were ever stung with bees from that colony. I attributed their docility to the breed, and kind treatment; surely it was not because they were let alone.

I never can believe that an insect that has as much intelligence as our Heavenly Father has given the blessed bees, is insensible of kind treatment, nor that proper manipulation will make them truculent. Still, I dare say that Mr. Pestell is correct in saying that the "less they are manipulated.....the less truculent they become—most bee-keepers admit." Most bee-keepers *may* admit some things which are not facts.

A neighbor of mine once had some bees that were "barbarians." In color they were black, and in disposition savages; they would sting the fowls, dogs, the stock on the farm, and finally got so bad that he came five miles for me to go over and see if I could do any thing with them. I was busy, and did not want to go. He said that if I believed in the "golden rule" I must go, for he was at his wits' end; the bees (20 colonies) had gotten so bad that they not only stung every living thing on the farm, but came down to the house and "hunted for somebody to sting." I went. For two days we straightened up combs, transferred, etc. I put in all the time talking to him, and when I left he said my visit was worth $500 to him. From then to the end of the season those bees were "manipulated" ten times as much as before; he never had any serious trouble with them, though they were never quiet like Italians.

Now, what I want to make clear is this: Italian bees are "civilized," and the blacks are "barbarians," but kind treatment and proper handling have their effect in taming and quieting any stock, even the bees. I love them.

The wise man said: "A righteous man regardeth the life of his beast."—Prov. 12:10.

Orillia, Wash.

Progress and Improvement—Deep Hives.

BY S. B. SMITH.

We often see in testimonials of the Bee Journal expressions that lead us to think that it has ascended to the top of the ladder of fame, but I do not think so; the Editor of the Bee Journal is too progressive a man, like all good bee-men, to be satisfied with any present supposed attainments. "Progression" is inscribed on the banner of apiculture. The editors of the various bee-papers are our leaders, supported by an able corps of contributors.

We are far in advance of the generation that preceded us, not only in bee-knowledge but in knowledge of all kinds, and

the generation to follow us will be as far in advance of us as we are in advance of our predecessors, for such is the law God hath given to govern the human race. We cannot remain where we are—we must either advance or retrograde.

Dr. Marshall's address before the Southwest Texas Bee-Convention brought fresh to my mind the ideas of my childhood. Dr. Marshall is 14 years my senior, yet I distinctly remember those old superstitions. It is a long time since I have heard any reference to a king-bee, and I should be pleased to meet the "king-bee of Texas." I would also be pleased if I had a picture of Dr. C. C. Miller hung in my house. I think a pleasant face, such as the Doctor has, would cheer a man when the cares of life press heavily upon him.

I am amused when I read the difference of opinion on the hive question. I think the hive to be used depends largely upon location. Where bees can be wintered on the summer stands, I should prefer the Langstroth hive, but in this cold climate I think a deep hive is better for wintering, but there are so many objections to a deep hive that the advantage in wintering will not overcome those objections. A deep hive that is so constructed as to contain the same number of cubic inches as the Langstroth hive places the sections too far from the entrance and makes extra work for the bees to crawl up through, and there cannot be as many sections on such a hive and they must be taken off oftener, and this disturbs the bees; besides, they do not store as much honey.

Last spring I was obliged to take my bees out of the cellar in March; the weather was warm for about a week, and then turned very cold for about three weeks, and when it became warm again I found one of my best colonies dead. As there is no timber here for a wind-break, I have built a kind of shed as a shelter for my bees, open only to the south, and I found the bees in this dead colony all clustered at the top of the brood-combs, and no honey where they were, but there was nearly honey enough in the back part of the hive where the sun did not shine on it to winter a good colony. Now, if I had had that colony in a tall or deep hive, I would not have lost them; and yet, for all purposes I like the Langstroth 10-frame hive the best; but the *best* hive is the one that any bee-keeper likes the best and has the best success with. Thus far (Feb. 2) the winter has not been very severe, and my bees are wintering well. Keeville, Minn.

The Sunny Southland.

CONDUCTED BY

MRS. JENNIE ATCHLEY, BEEVILLE, TEX.

Transferring and Building Up for the Honey-Flow.

I have purchased quite a lot of bees in box-hives. Our fruit blooms the last of March, and poplar the first week in April, basswood June 10 to July 15, sourwood July 1 to the 15th, then comes the celebrated mountain or black sumac that always supplies our bees with winter stores. If I transfer the bees the last week in March, dividing them up into 2-frame nuclei, giving each nucleus about a quart of bees and a queen, adding frames of comb or foundation, will they build up in time to catch the basswood or linden honey-flow?

Tracy City, Tenn. W. M. SCRUGGS.

Friend Scruggs, I think you can build up your bees from March 20 to June 10, ready for the basswood flow, especially if you will feed right along, should the bees fail to get honey enough to breed up on.

Eight or Ten Frame Hives?

As many beginners are now asking which is best, the 8 or 10 frame hive, I will say that I do not believe it will matter very much which you use of the two, but as the 8-frame hive is fast coming into general use, and may soon be a standard, and as standard goods are cheaper, as a rule, I will say use 8-frame hives, and if you can't get room enough on the ground floor, put on an up-stairs, or two stories if need be, and you will have all the room needed.

It is best to settle down on some hive as you start, and as locality has something to do with large or small hives, I would suggest that you find out, if possible, what kind of a hive, or size, the nearest bee-keeper to you is using and making a success with, and use that size, and you will not go far wrong.

The time has now arrived when we see plainer than ever the necessity of a uniform frame, as the trade and traffic in bees is growing more and more every year, and those who have to sell get more for their bees if they are in the regular standard Hoffman or Langstroth Simplicity frame. Whatever hive you use, I would advise the use of the standard frame.

I will venture to add here what I have often said, that it is not the hive altogether that is to be depended upon for a crop of honey, it is the bee-keeper; and if you use a hive that you can contract and enlarge when you choose, and use the standard frame, you are all right as far as the hive goes. But it won't go far without bees and a *bee-master.*

My advice would be: Get your bees in condition to catch your honey-flow; use a hive that you can catch a big crop in, if it should suddenly run upon you; and then smile while you take it off the hives. That is what I call real enjoyment.

JENNIE ATCHLEY.

A Report for 1894.

MRS. ATCHLEY:—My report for 1894 is 7 colonies in the spring, increased to 11, and extracted 430 pounds of honey, 60 pounds of it being comb honey. I sold about half of the extracted for 10 cents per pound, the rest for 8½ cents. Bees are doing well. I don't think I will have to feed any this season, as my bees have plenty of stores yet, though we are having some pretty cold weather now (Jan. 30). We have had 5 inches of snow on the ground for three days.

Grandview, Tex. W. E. WAGGONER.

Time Necessary to Rear a Queen.

MRS. ATCHLEY;—Speaking about the queens, you have said the following: "Three days in the egg, one day larva, 12 days a hatched queen. Now count and see if this is not 16 days." American Bee Journal, Vol. XXXIII, page 652. On page 815, you repeat the same theory, which either I did not understand clearly, or, if I understood it aright, I can with difficulty accord it with the theory that is taught in Europe. Our theory is: Three days in the egg, 5½ larva, and 8½ days chrysalis; that gives our hatched queen the 17th day. JAAK M. VON EMELEN.

Belgium, Europe.

Friend E., I think you must have misunderstood my meaning. I was giving instructions on queen-rearing, and of course did not carry out the different periods, etc., in the development of the queen-bee. I meant 3 days in the egg, using a larva one day old to rear queens with, or graft with larva only one day old, making 4 days, and 12 days more a hatched queen, making 16 days in all. I did not mean that we could expect a perfect hatched queen in 12 days from the egg, but 16 days. I ought to have been more definite in these statements. Sixteen days is about right. But we have it on record here where we have perfect hatched queens in 15½ days from the egg in warm weather.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Wintering Bees Under Snow—Black Bees.

In the American Bee Journal for Jan. 24, you state that if bees are buried under snow more than a week or two it works mischief. We do not find it so here. In fact, we consider it a blessing to have them buried under the snow during the cold part of the winter, which is over two months; but in March it is not safe, unless the snow is removed from the entrance, in case it should get warm enough for a flight. I have wintered them on the summer stands for the last five winters, packed in oat chaff, and buried under two to three feet of snow from two to three months at a time. We are having a severe winter here in northern Wisconsin. It has been from 10° to 30° below, off and on, for the last three weeks—Feb. 1, 48°, Feb. 2, 41°, Feb. 3, 46° below zero at 7 o'clock a.m., and 91 colonies of bees on the summer stands, which seem to winter splendidly. They weighed from 60 to 90 pounds per hive when packed last fall, being in 10-frame dovetailed hives.

Since you are favoring the Italians, I will give you a statement of my "blacks" for three years: In 1892, from 13 colonies, spring count, 2,585 well-filled sections, and some partly-filled sections weighing 14 ounces each, or an average of 198 per colony. In 1893, 33 colonies in the spring, 3,000 pounds net; 1894, 59 colonies, increased to 104, and took 7,000 pounds net; over 6,000 pounds of the 1894 crop graded fancy and No. 1. Average income per colony in 1892, $23; in 1894, $13.50. Last year's crop brought from 12½ to 15 cents on the cars here.

When I pinch the head off a black queen and put an Italian in her place, I will be older than I am to-day.

Cumberland, Wis., Feb. 4. L. M. K.

ANSWER.—I think likely you have the right idea about the snow business. I have no personal experience in the matter, but from the fact that G. M. Doolittle reports loss from snow piled over hives it is evident that it isn't the safe thing at all times. Perhaps it may be that the danger doesn't come till March, when the warmth induces too much breeding, or what is the trouble in March?

The man who can get $13.50 to $23 per colony would do well to think twice before making any material change in his plans. Still, the question may arise whether the man and the location may not have a good deal to do with it. It would be interesting to know what 10 colonies of Italians would have done under precisely the same conditions.

When to Introduce Queens.

I wish to introduce some new queens early in the spring, how soon after removing the bees from the cellar should this be done? V. S.

ANSWER.—I don't believe I would do it before fruit-bloom.

Thin Foundation in the Brood-Frames, Etc.

1. How would surplus foundation, such as Root's thin surplus, do to put in brood-frames, provided it is well wired? I have heretofore used only a 1-inch starter of light brood foundation, but would like to use more, and having more surplus foundation on hand than money, I have wondered whether I could not use it by wiring a single sheet in a frame.

2. Were any honey-bees found natives of America, or were they imported? If so, when, and from what country, and by whom? INQUIRER.

ANSWERS.—1. It will work all right, if as you say, the frames are well wired. Of course, the lighter the foundation the greater the inclination to sag, especially if a heavy swarm be thrown upon the foundation.

2. Hive-bees were not natives of this country, and were called by the Indians the "white man's fly." Being some 200 miles from home, with nothing to refer to, I cannot answer precisely, but I think bees were brought over early in the 17th century.

Could Not, or Would Not, Rear a Queen.

On page 103, is a question from J. T. H. about a colony of bees that "could not, or would not, rear a queen." As I am the person referred to, a further explanation is needed to make the case clear to you. Last spring I had 2 colonies of bees; both seemed strong and in good condition. Drones were flying by April 13 from the one I want the information about, but in a short time I noticed the drones were much smaller, being about the size of the worker-bees. I concluded a laying-worker was in the hive, or else the queen had become a drone-layer, as she was at least 3 years' old, and maybe more. So I opened the hive and took out the queen; she did not seem very active, crawling around very slow, and did not attempt to fly. I put her under a tumbler, but she did not live an hour. I examined her body, which contained plenty of eggs. Then I gave this colony a frame of brood which contained larvæ and eggs, so they could rear a queen, but although they built queen-cells and capped them, they did not hatch, for I examined them in due time, opening the cells, and found only a milky looking substance in them. Then I tried again with another frame of brood; mere nice queen-cells were built, but did not produce anything.

Now the "books" say that when a queen is removed the bees become uneasy; running out in front of the hive as if they had lost something; there was not the least commotion about this hive—they did not seem to care whether they had a queen or not. The brood I gave them must have been good, for the colony I took it from cast a fine swarm which built up well for winter.

Well, the queenless colony of course dwindled away, and the moth took charge, I am sorry to admit, but that was because there was sickness in my family, and I did not have time to look after them any more.

Now, Doctor, if your patience is not all exhausted after reading this, please answer in the Bee Journal why they "could not, or would not, rear a queen." J. T. H.

Columbus, Ohio.

ANSWER.—No worker-bees having been reared for some time, there were nothing but old workers in the hive, and they don't make so good work at rearing queens. Moreover, they were more reconciled to their condition than if they had suddenly been made queenless after having had a good queen. Even if everything else had been all right, it is nothing unusual to find one or more cells in a hive that fail to mature all right, although correctly sealed over. I never knew a case, however, in which all the cells failed, but there would be nothing impossible about it.

Hiving Swarms and Uniting.

1. I am using a hive that is incapable of being tiered up, but which, if the division-boards are spread, will hold 14 or 15 frames. Can I, when a swarm issues, shove the old frames to one end of the hive, put in a wire-sieve division-board, and new frames containing starters, and hive the swarm in the hive with the parent colony, providing a separate entrance is made? 2. If so, must the surplus arrangements also be divided? 3. How long after swarming must I wait before I can unite them. 4. Must I take away one of the queens in orner to unite them? 5. In uniting them, can I take the wire-sieve out at once? 6. Can swarms of different colonies be united in this way? 7. Would it be more profitable to hive in a contracted brood-chamber, say five frames? J. R.

ANSWER.—1. Yes, that's done sometimes. 2. No; one super may cover the whole business, but there should be a queen-excluder over the brood-chamber to keep the queen on her own side. 3. They can be united after all the young queens are hatched or destroyed, or they may be united any time later. 4. Not necessarily. 5. Yes. 6. I think so. 7. It might, but much depends upon after management. Don't try your new plan too heavily. You're likely to have a big swarm come out when the first young queen hatches.

Bees Packed for Winter—Ordering Queens.

1. How about hives with bees put in a box 6 inches larger all around, leaving an entrance 1x6 inches, packed with wheat chaff? Do you think I have them too warm? I left the blanket and cover on, and about 10 inches of chaff on the top of the hives, with a shingled roof on each box.

2. How would you advise me to send from eastern Pennsylvania; or is that too great a distance to send queens from? I have Italian bees, and think they are beauties and good honey-gatherers.

3. Who would you say has the best queens? I want to buy some. A. C. K.

Racy, Mich., Feb. 9.

ANSWERS.—1. Some keep their bees through the winter in very much the way you mention. You allow the moisture from the bees to pass into the chaff, and you mustn't have the cover so close that the moisture will be held in. Some think it full as well not to have as much as 6 inches of space for the chaff.

2. For a long distance, perhaps the best way to send queens is by express, but queens are constantly sent to all parts of the United States by mail.

3. I don't know. Quite a number of good breeders advertise from time to time whose queens I wouldn't be afraid to use.

That New Song—"Queenie Jeanette"—which is being sung everywhere, we can send you for 40 cents, postpaid, or club it with the American Bee Journal for one year—both for only $1.20. Or, send us one new subscriber for a year (with $1.00), and we will mail you a copy of the song free.

Please Remember that I am *not* a dealer in bee-keepers' supplies, so do not send to me for a catalogue, etc.—EDITOR.

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GEORGE W. YORK,
EDITOR.
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DR. C. C. MILLER - - - - "QUESTIONS AND ANSWERS."
MRS. JENNIE ATCHLEY - - - - "THE SUNNY SOUTHLAND."
"GLEANER" - - - - - "AMONG THE BEE-PAPERS."
"BEE-MASTER" - - - - - - "CANADIAN BEEDOM."
DR. F. L. PEIRO - - - - - - "DOCTOR'S HINTS."
REV. EMERSON T. ABBOTT - - "NOTES AND COMMENTS."

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Editorial Budget.

Rev. E. T. Abbott has been lecturing on bees at the State University, located at Columbia, Mo. He reports a grand good time, and says he "never talked to a more attentive audience than the one there, made up of students and professors." Mr. Abbott "found them ready to do all they could to help out the industry" of bee-keeping. Those Missouri people seem to be "all right." Glad of it.

Mr. Geo. Neighbour, of the firm of Geo. Neighbour & Sons, large bee-supply dealers of London, England, died week before last. Mr. Neighbour was one of the best known bee-men in Great Britain. Messrs. Chas. Dadant & Son were just filling an order for 1,800 pounds of comb foundation for this English firm, when they received a cable message announcing the death of Mr. Neighbour, and countermanding the order until further notice. No doubt Mr. N.'s sons will continue the business.

Hon. Geo. E. Hilton, of Fremont, Mich., delivered an interesting address Feb. 23, to the bee-keepers of Saginaw county, Mich. About 25 bee-keepers were present, and a very pleasant meeting is reported. Mr. F. E. Gibson, of Racy, Mich., wrote me about the lecture, and said: "We hope to have it repeated soon." Mr. Hilton sets a good example, which should be followed wherever a local meeting can be gotten up. Nearly every county in the country possesses one or more apiarists who can, and would, talk entertainingly and profitably on the subject of bee-keeping. Why not hold an evening meeting occasionally?

Large vs. Small Hives has recently been much discussed in Gleanings, and, in fact, in some of the other bee-papers, including the Bee Journal. On page 166, Mr. Chas. Dadant, in his series on "Extracted Honey," gives one of the best articles ever published on this question of large vs. small hives. Read it carefully, for Mr. Dadant is one of the strongest advocates of large hives, and one of the most experienced.

Mr. Ernest R. Root, in Gleanings for March 1, gives the following concise editorial recapitulation of "what has been learned from the discussion of large vs. small hives:"

Let us briefly recapitulate some things we have learned in the hive discussion up to the present time:

1. There are more bee-keepers using large brood-nests than we were aware of.

2. Many more favor 10-frame hives in preference to the 8-frame than we supposed, although, if we could count the hands of those using the 8-frame hives and those using the 10-frame hive, I think we should probably find three of the former to one of the latter.

3. It seems probable to me, at least, that some are using too small brood-nests, say of 8-frame size, when they might possibly get better results with 10 and 12 frame sizes.

4. In colder climates, especially where there is one main honey-flow in June and July, with very little fall-flow, the 8-frame size seems to be used most. In warmer localities, in many portions in the South, in Cuba, where the seasons are prolonged, and where there are months when the bees can gather honey, instead of weeks, as it is with us up here in the North, a large brood-nest of 10, 12, and 16 frame capacity seems to have the preference.

5. Instead of bee-keepers running from 10 down to 8, as formerly, the tendency now seems to be from the small size to the large.

6. The double 8-frame hive of 16 frames is too large, since 12 frames seem to afford the maximum capacity for most localities.

7. Supply-dealers (pity the poor fellows) will do a lot of growling, because it will be a nuisance to keep so many *sizes* of hives in stock (to say nothing of styles), each size necessitating special covers, special supers, special bottom-bars, and special honey-boards. How nice it would be, dear brother supply-dealers (let us draw nigh and weep) if every bee-keeper could use one size of hive, one kind of frame, one kind of every thing. But, no. There are too many notions that are at variance—too many localities with different resources; too many things in general, to make us all think and believe alike.

Basswood in the South.—A number of questions have been asked about basswood trees the past month or two, and one about how far south they would grow. I have received several replies, which probably may as well be condensed as follows:

M. T. Fouts says: "I don't know how far South, but I know it grows well in north Georgia, western North Carolina, and here in East Tennessee. It blooms about June 25."

S. D. Mathews writes: "There is a large tree on the sidewalk in this town (in North Carolina), just in front of a hotel, and I never have seen it fail to bloom. It is almost certain to attract passersby with the hum of the honey-bee."

Geo. McCullough sends this: "I was born in Chester county, South Carolina, but was just a boy 4 years old when my father and family moved from that State in 1830. I have heard them speak of the basswood, and I think from its habits here (Iowa), growing best near the little streams, that it would probably grow in North Carolina, on the damp grounds along the little streams—at least, if I were located there, I would try it in such grounds. I see in my note book, 'Bees commenced work on June 20, 1894.' I think it would bloom some two or three weeks earlier in the South."

Those who wish to purchase basswood trees to plant, will find them advertised in the Bee Journal. Being such an excellent tree for honey as well as shade, it seems to me that by a little effort bee-keepers everywhere could easily induce their neighbors also to plant it. May be it would pay to buy the trees and set them out for your neighbors, as your bees would work on the bloom later on. Urge basswood in preference to other shade trees whenever your town does any tree-planting.

The Illinois State Fair Premium List for bees and honey, as adopted by the Illinois State Board of Agriculture, recommended by the committee of the Illinois State Bee-Keepers' Association, is on my desk. The judge, in this lot, is to be governed by the code of rules adopted by the Illinois State Bee-Keepers' Association. (See page 80 of their Second Annual Report.) The following is the premium list for the State Fair of 1895:

	1st.	2d.
Largest and best display of comb honey	$20	$10
Best case of white comb honey 12 to 24 pounds	5	3
Best case of comb honey from fall flowers, 12 to 24 pounds	5	3
Largest and best display of extracted honey	20	10
Best display of samples of extracted honey (named)	5	3
Largest and best display of candied houey	15	10
Best honey extracted on the grounds	10	5
Largest and best display of beeswax	15	10
Best one-frame nucleus in observatory hive, Italian bees	5	3
Best one-frame nucleus in observatory hive, Carniolan bees	5	3
Best display of queen-bees in cages	10	5
Largest and best display of comb foundation	10	5
Largest and best display of honey-plants, pressed, mounted and labeled	10	5
Best honey-vinegar—one quart or more	3	2
Sweepstakes in honey	25	15

Mr. Jas. A. Stone, of Bradfordton, Ill., the Secretary of the State Bee-Keepers' Association, kindly sent me the above. There certainly are a number of good premiums for the bee-keepers of Illinois to strive for. The apiarian department of the State Fair ought to be a fine thing, with such inducements offered.

Mr. D. E. Merrill.

The picture shown in the second column of the first page this week is that of the editor of the American Bee-Keeper, published by the W. T. Falconer Mfg. Co. When sending the photograph, Mr. Merrill said:

The picture is, of course, much better looking than the original—artists must make them so to sustain their reputations, you know. The position is not exactly as "reposeful" as might be. Taking all together, however, my friends say they would recognize the picture as intended to represent me.

Mr. Merrill was born Sept. 6, 1859, in Chautauqua county, N. Y. When about 10 years old his parents moved to Titusville, Pa., where he lived until 1874, after which time, until 1882, he lived at Erie, Pa., where he received the greater part of his education. He went to Jamestown, N. Y., in 1882, where he has lived ever since.

In 1888, Mr. M. went into partnership with Mr. W. T. Falconer, who had been engaged in the manufacture of bee-keepers' supplies since about 1872. Besides bee-keepers' supplies they make a considerable quantity of other goods, and employ from 50 to 125 hands, depending upon the time of the year. Mr. Merrill devotes very little time to the bee-business, as that department is looked after by Mr. Falconer, Mr. M.'s time being fully occupied with the other lines of their business.

He has always taken a great deal of interest in out-door recreation, and to the fact that he spends all his spare time out-doors, he owes the pleasure of good health. He is very fond of yachting, and owns a sloop on Chautauqua lake. He is also a bicyclist, having ridden several "centuries" (100 miles a day).

Mr. Merrill is married, and has a family of three strong and healthy boys, the oldest being 6 years, the youngest only a little over one year old. Mr. M. is a Yankee, bred from "way back," his ancestors having come from France to England in 1583, and from England to America in 1635—a little too late to be in the Mayflower, however.

I am sure the foregoing short sketch will be read with interest, as the man who has the most to do with the American Bee-Keeper has heretofore been but little known to the bee-keeping world, particularly in name.

Next week I expect to "hold up" Mr. R. B. Leahy, of the Progressive Bee-Keeper, in these columns. THE EDITOR.

Among the Bee-Papers

Conducted by "GLEANER."

HOW MANY EGGS A DAY LAID BY A QUEEN-BEE?

3,000 is often called the maximum. Doolittle says in Gleanings that if you give a prolific queen 8 frames and then increase as she needs them to 30 frames, she'll lay 5,000 to 6,000 eggs daily through most of the laying season and die at 18 to 24 months old. He don't believe in such heavy laying, and says: "From all past experience I think that 2,400 eggs per day day would be a good maximum average for any queen."

LARGE VS. SMALL HIVES.

This question doesn't seem to be settled very rapidly. In Review, B. Taylor reports having tried along side of 10-frame hives some 40 larger ones, having 12, 16 and 19 frames, only to store them away as useless rubbish. J. E. Crane reports that in his home apiary he has much better success with hives having 7 or 8 frames, while 6 miles away 10 or 11 frames are decidedly better, the honey-flow being quite different in the two places.

RIPENING EXTRACTED HONEY.

Opinions differ as to whether honey can be ripened artificially as well as in the hive. For those who believe in the artificial ripening, a plan given by Mr. I. Hopkins in the Australian Bee-Bulletin seems well worthy a trial. He says:

"My arrangements were—a very warm extracting-house; large, shallow wooden tanks, 6 feet by 4 feet and 18 inches deep, lined with tin; and good strainers. As the honey ran from the extractor, it fell into the strainer, or rather strainers, three arranged one above the other, the top one rather coarse, the middle one finer, and the lower one very fine. This lower one split up the honey into very fine, silk-like threads as it dropped into the tank, and I believe a good deal of the surplus water evaporated during the extraction. The honey was allowed to remain in the tank exposed to the atmosphere for a day or two until I considered it sufficiently ripe to tin. In the meantime a scum would rise to the top, which of course was skimmed off."

EXTRA-LARGE COLONIES.

If we had a big pile of bees, as we sometimes do in the swarming season, when several swarms go together, how many would it be profitable to put together in a hive in dividing them up? I have sometimes hived these big abnormal colonies all in one hive, and given them room, and watched them with expectation of wonderful results. To be sure, they work very rapidly at first, and do more than an ordinary colony; but they never come up to my expectation. They soon become normal in size, and never make a record that will compare with the same amount of bees in two colonies.—H. R. Boardman, in Gleanings.

SWEET CLOVER FOR HOG-PASTURE.

C. H. Dibbern says in Gleanings: "I have often wondered why farmers did not make more use of sweet clover as a forage-plant and for fertilizing. I know of several hog-lots, of from 10 to 20 acres, that have produced nothing but dog-fennel for the past 10 or 15 years. Why not plow up, say, half, plant to sweet clover, and keep the hogs off for the first year? The next spring, plow and seed the other half and turn the hogs in to live on the tender clover shoots. If not overstocked, enough clover would bloom and seed the ground to keep it from running out. Incidentally, the neighboring bee-keepers would be benefitted."

BARRELS FOR EXTRACTED HONEY.

E. France says in Gleanings that he'd rather handle a large crop of honey in 370-pound barrels than in the popular tin cans. And where do you think he keeps his barrels till needed, so they won't leak? "In the cellar?" Not a bit of it. Kept in a cellar they're sure to leak. He gets his barrels ready in winter, keeps them in a dry, warm place, then drives the hoops before using, and has no leaking.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

The Sweets That Waste.—"It is too bad to allow so much of the sweet provided by Nature to go to waste for lack of a little care and attention on the part of many farmers who have facilities for carrying on this important adjunct to agriculture."—Canadian Bee Journal.

This is well said; however, I would not call bee-keeping an "adjunct," but a *branch* of agriculture. It is not something to be joined onto agriculture, but as much a legitimate part of it as raising wheat, poultry, or calves. I am decidedly of the opinion that the sooner the agriculturists recognize this fact and profit by it, the better it will be for the country. Then, again, if apiculturists will press the claims of the industry on the ground that it has the same reason for recognition as any other branch of agriculture, I am sure it will receive this recognition much more quickly at the hands of the experiment stations and agricultural colleges of the country than it will if its claims are pressed as an independent industry. I know that some of our bee-keepers hold that farmers should not keep bees; that bee-keeping is not an industry suited to be carried on in connection with mixed farming, but I am not among that number. I am confident that apiculture can be more successfully conducted as a branch or part of mixed agriculture than in any other way.

It may be claimed that this industry requires special skill and aptitude, and that this cannot be found on the farm. Further, that the farmer has not time to give the bees the attention their successful management demands. Now all of this may be true, and I will admit it for sake of argument, and yet I insist that the proper place for this industry is on the farm. Almost every farmer's household is made up of a number of people, and there is generally some one among that number who would be successful with bees, if he or she would make the proper effort to learn how to handle them. Bees and poultry belong on the farm, but they should not be left to shift for themselves, but should be placed under the immediate charge of some member of the family.

Frequently it would save the father and mother many days of anxiety and sleepless nights, if the bees were placed

in the hands of a son or daughter with the understanding that he or she could have all the clear profit made out of them over and above the honey needed for family use, and the necessary expense of hives, etc. Too many farmers bring up their children without permitting them to have anything they can call their own, and then when the boys persist in leaving home, or the beautiful young daughter goes to the bad, they wonder why it is. They try to console themselves with the remark, "I always tried to bring my children up to do right," little thinking that what they have called "doing right" has narrowed the lives of their children down to a very small compass.

Give the boy the bees, give the girl the poultry. Let them have something they can call their own—something for which they will feel the entire responsibility—and then "doing right" will not seem so much a matter of arbitrary restraint. The right to think and act for themselves will develop the latent manhood and womanhood which will seek all that pertains to it because it will be to them the dearest spot on earth—a home of happiness and contentment.

Yes; it is too bad to let this delicious sweet go to waste when it means so much to the farmer and his family; nay, more; when the very labor necessary to the saving of it may be the means of so sweetening life to some boy or girl that no temptation will have any influence to lead him or her astray. Employment with contentment—and contentment is more apt to exist where there is a feeling of personal ownership—is the best possible cure for any mania to leave the farm and try the hot-house and over-reaching methods of city life, that may come to a boy or girl.

Surely there is someone on every farm who can find sufficient time to properly care for bees enough to furnish the family with honey, and a few extra pounds for "pin money," or to buy a good book, or something that will be a source of pleasure to the family. If so, it *is* too bad to let it go to waste.

Abuse of the Smoker.—"It is a very difficult thing to estimate what amount of mortality is caused among bees by the injudicious use of the smoker; but could it be accurately arrived at, I dare say a good many bee-keepers would be surprised to find what havoc they had caused among the inhabitants of their apiaries by the injudicious and indiscriminate use of even a cold-blast smoker."—Writer in Gleanings.

Here is food for a good deal of reflection. I confess the matter was never brought so forcibly before my mind until I read the article from which the above is a quotation. Do we really kill our bees by smoking them too much? We all know how painful smoke is to a member of the human family. Is it equally so to insects? It is true they do not breathe through lungs, as we do, neither do they have the same kind of a nervous organism, but they no doubt have feeling, and possibly the mucous membrane—lining the trachea through which they breathe—is equally as sensitive as that of our throat, bronchial tubes and lungs. But, even if it is not, there can be no question that the smoke is very disagreeable to them, as any one can readily see from the effort they make to get away from it; and if disagreeable, analogy would lead us to conclude that it is more or less injurious.

The writer of the paragraph quoted claims that bees are killed by the injudicious use of the smoker, and his arguments to prove the same seem to be well taken. Let this be as it may, there is no question that many bee-keepers, perhaps the majority of them, use the smoker more than is necessary. A few puffs of smoke, if properly directed, is all that is generally needed, as there is no use in smoking bees when they show no disposition to sting. Many people work the smoker like a blacksmith does his bellows, and as though they thought their lives depended upon it. This is not only a foolish but a useless practice, for the truth is the smoker will not throw out as strong a volume of smoke when worked in this vigorous way as it will with a more gentle movement. I have often heard bee-keepers say, "Well, if a little is good, a good deal will be better," and, acting in accordance with this, they would pour volumes of irritating smoke into the hive without any thought of the feelings of the bees. As I said above, this is not only a useless practice, but a manifestation of needless cruelty, little becoming one who has any regard for the comfort of "dumb animals," as we are won't to call them. Some of them are not as "dumb" as the people who handle them seem to think.

Wintering Well.—In spite of the extremely cold weather, reports so far indicate that bees are wintering well. This is indeed surprising. When we remember cold winters are followed by early springs, usually, the prospect so far is encouraging.—Gleanings.

Canadian Beedom.

Conducted by "BEE-MASTER."

Mr. McEvoy's Foul Brood Report.

BY REV. W. F. CLARKE.

BEE-MASTER, *Sir:*—I did not expect to trouble you so soon with another "Echo," but the appearance of Mr. McEvoy's report as Foul Brood Inspector, on page 138, compels me to do so. I was not present when that report was read to the Ontario Association, and knew nothing of its contents until I saw it in the American Bee Journal of Feb. 28. The report was presented at an evening session. The weather was stormy. I was stopping with a friend nearly a mile away from the place of meeting, and with sciatica haunting me I did not dare to venture out-doors. Not until I got my American Bee Journal on Friday, did I know that I was virtually put in the pillory, and arraigned as a public criminal in the Foul Brood Inspector's report.

It will be said, "Why, you are not named." I reply, I might as well have been. All Canadian beedom knows that I live in the County of Wellington where Mr. McEvoy reports having burned three foul-broody colonies. Besides this, Mr. McEvoy, notwithstanding he takes great credit to himself for suppressing names, has made no secret of his having burnt three of my colonies. I question if there were a dozen out of the hundred bee-men present at the Stratford meeting who were not furtively apprized of the fact. How does this look alongside the statement made in the report that a resolution had been passed by the Board of Directors prohibiting any person from getting the names except the Minister of Agriculture. Moreover, Mr. McEvoy not only as good as names me, but puts a bad mark against me. I am evidently hinted at in the statement:—"Some that had only a few colonies, would be so careless and indifferent about the curing, and would not do as I told them, and then I resorted to stamping the disease out by fire for the public good." Again, he says, "I burned three foul-broody colonies in Wellington county. I was well pleased with the work done by the owners of all other foul-broody colonies."

I have nothing to conceal in regard to my experience with foul-brood, and nothing to be ashamed of in regard to it. I am rather glad of the opportunity to state, "What I know about foul brood?" Whether I am justly open to the charge of carelessness, indifference, or disobedience to Mr. McEvoy's authority, I will leave the bee-keeping public to judge when I get through with my story.

In commencing my present apiary in the spring of 1891, I knew I was running a great risk from the proximity of foul brood. Within a half-mile in one direction there was an apiary of 80 colonies that I knew had the disease badly, for I could smell it from the sidewalk. Half a mile in another direction an apiary of 100 colonies had gone up with foul brood. A mile off in another direction were the last vestiges of another apiary of 40 colonies that had "pegged out" with the disease. But I wanted to resume bee-keeping if only for the diversion of it, after being unable to enjoy the pastime from various causes for two or three years. Wishing to take every precaution, I obtained an official visit from Mr. McEvoy. He ordered 11 colonies of the 80-colony apiary to be burned, and put the rest under a course of curative treatment. He found a solitary colony over the fence from my apiary grounds rotten with foul brood, and got the owner's consent to burn it at once. He examined my colonies—16 in number—and pronounced them all right. They consisted of 10 hybrid colonies bought of Mr. R. F. Holtermann, 3 pure Italians from Mr. Henderson, of Tennessee, and 3 Carniolans from Mr. Turner, of Wisconsin.

During the following summer I detected the first signs of foul brood, and at once made use of the Cheshire prescription. I also notified Mr. McEvoy that the disease had appeared in my apiary, and he paid me a visit soon afterward. He found mild traces of the disease, but there was no bad case. I was trying the phenol treatment and he wished me to become convinced that it was no good, so let me go on with it. He also wanted to try an experiment of his own to which I had no objection. In spring he called to look at the results of our experiments, found them failures, and promised so soon as the honey season began, to come and put my apiary, as he said, "in grand order." He wrote on May 22, 1893, informing me that he had ordered the necessary bar-heads with half-inch strips, also Langstroth frames with full-sized foundation, and directing me to hurry up and have all things in readiness.

Toward the end of June he notified me that he could not come. I was not surprised at this, because I knew he was driven from pillar to post with calls here, there and everywhere. So I went to work myself and made, as I thought, thorough work of it, reducing my colonies to 10, boiling all the old honey, melting down all the old combs, and feeding all the colonies that were short of stores. I made considerable sacrifice to get rid of the pest, and my bees went into winter quarters, as I thought, clear of it.

The next spring (1894), I asked the President of the Association to authorize Mr. McEvoy to call and look at my apiary, and see if he could give me a clean bill of health. I neither saw nor heard anything of him until July 25, 1894, on which day I received the following note from Dr. Mills, President of the Ontario Agricultural College:

"My Dear Sir:—I regret very much to have to inform you that Mr. Wm. McEvoy, Foul Brood Inspector, has this morning inspected the three hives of bees which you placed on the College campus to assist in illustrating your lectures on bee-keeping, and has formally notified me that they are diseased with foul brood. I have therefore to request you to have them removed from the grounds at once."

It was late in the afternoon before I got this official intimation. Accompanying it was a private note informing me that it was only one of the hives that was considered tainted, and that Mr. McEvoy wanted to burn it on the spot, but the President forbade his doing so, and told him he would have them removed to my own apiary where he might deal with them. On receiving these communications, I at once hastened to the apiary to get my bee-veil, smoker, wire-cloth, etc., and make preparations to remove the three hives of bees. On reaching the apiary, what was my surprise to see a smouldering heap of ruins, and near by several clusters of bees clinging to sticks and stalks, contemplating the burning ruins of their homes. After removing my three hives from the College grounds, I got an expert to examine the colony Mr. McEvoy wanted to burn, and he could not find a speck of foul brood in it. A very curious thing happened shortly afterward to this colony. One morning, between eight o'clock and noon, that particular hive was removed from its stand to a secluded spot back of my house-apiary, pulled to pieces, three brood-frames carried away, and the remaining frames, more or less full of honey, piled iglepigledy on each other, and the bees clustering as best they could between and upon them. The queen was all right, so I fixed up the hive again, and took special pains to prepare it for winter. If it survives until spring, we shall see what we shall see. This was a very mysterious circumstance. I wonder if Mr. McEvoy can explain it.

Now I have stated these facts in as fair and circumstantial a manner as I can, because I wish to call the attention of bee-keepers to the practical working of our Foul Brood Law. Especially do I wish to call the attention of the legal lights of bee-keeping—such men as Hon. R. L. Taylor, Messrs. J. E. Pond. G. W. Demaree, and others, to this piece of legislation. I do not wish to say anything hard of Mr. McEvoy, or to be unfair to him in any way, though I think he pursued a very high-handed course with me, and treated me very unkindly, considering the friendly terms we had always been on previously. Why did he not call on me? I had asked for his visit of inspection, and was prepared to welcome him and carry out his official orders. I have no doubt he thought he was carrying out his functions according to law, but the law reserves some rights to criminals even, and does not put arbitrary power into the hands of such high and mighty officials as inspectors.

I have taken legal advice about this matter, not that I intend to litigate about it, for I do not. But I am told by my lawyer that the Act does not empower the Inspector to go on to a bee-keeper's premises without the knowledge and consent of the owner, and that it does not empower him to burn hives of bees unless they are in a hopelessly foul-broody condition. If they are curable he is bound to give them a chance to be cured. Furthermore, the law does not put into the Inspector's hands any power of punishment. He cannot visit any official wrath on an offender. If a bee-keeper can be shown to be culpably and criminally negligent, the Inspector is to bring him before a magistrate and have him fined in due course of law. So that Mr. McEvoy is liable for trespass, for destroying colonies that might have been cured, and for taking the law into his own hands by usurping the place of the magistrate whose alone it is to be "a terror to evil-doers and a praise to them that do well."

But I wish particularly to ask the opinion of bee-keepers, and especially the legal gentlemen among them, on the principle underlying this kind of legislation. Is it a sound and good one? I opposed our Foul Brood Act when it was first mooted on various grounds. I have never suggested its adoption by United States bee-keepers. I now submit my own example of its practical working, that they may judge for themselves.

If Mr. McEvoy's interpretation of the Act is correct, and he has the right to go onto my premises and burn up my property at his discretion, without my having any appeal to magistrate or witness, judge or jury, I propose to submit quietly, and if I cannot get the law altered in a constitutional way, I shall seriously consider whether I will quit keeping bees, or emigrate to another country. I hope some of the great lights of bee-keeping will drop some of the threadbare subjects of which readers of the bee-papers are getting so tired, and discuss this now live topic. I hope, too, that the North American Bee-Keepers' Association will give this subject a prominent place in their discussions at the next meeting. If I am alive and well, I promise to be on hand and to have something to say that will not be "dull as a sermon."

Guelph, Ont., March 4.

Honey & Beeswax Market Quotations.

CHICAGO, Ill., Mar. 4.—The demand for both comb and extracted honey the last two weeks equaled any like period during the present season, and our market is comparatively bare. We attribute this to the continued cold weather. We advise any one holding honey to ship now while there is good demand. There is a great deal of inquiry for California extracted — more than usual We quote: White comb, 14@15c.; extracted, 5@7c.
Beeswax, 26@28c. J. A. L.

CHICAGO, Ill., Mar. 7.—During the past two weeks a good movement has been felt in the market. Sales have been in small lots, but quite frequent. We quote: White comb of the highest grade, 14c.; off in color, 13@13½c.; yellow, 10@11c; dark, 7@9c. Extracted, 5½@ 7c.—the higher price for white in 60-lb. cans.
Beeswax, 28@30c. R. A. B. & Co.

CINCINNATI, O., Feb. 20.—Demand is quiet for all kinds of honey. Best white comb honey sells at 14@16c. in the jobbing way. Extracted, 4@8c.
Beeswax is in good demand at 23@28c. for good to choice yellow. C. F. M. & S.

PHILADELPHIA, Pa., Feb. 15.—Comb honey is very plenty and slow of sale at 12@13c. Extracted in fair demand at 5@6½c.
Beeswax scarce at 30@31c. W. A. S.

NEW YORK, N. Y., Feb. 20.—We are gradually working down our stock of comb honey, and the indications are that we will succeed in disposing of all of the white honey and possibly all of the dark during the spring, at following quotations: Fancy white, 1-lbs., 12c.; fair, 10c.; buckwheat, 8@9c. The market is well supplied with extracted honey. Demand is fair for choice grades, while common stock is neglected. We quote: White clover and basswood, 5½@6c.; buckwheat, 5@5½c; Southern, 45@55c. per gallon, according to quality. Beeswax firm and in good demand at 30@31c. H. B. & S.

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R. A. Burnett & Co., 163 South Water Street.

New York, N. Y.

F. I. Sage & Son, 183 Reade Street.
Hildreth Bros. & Segelken, 28 & 30 West Broadway
Chas. Israel & Bros., 110 Hudson St.
I. J. Strinoham, 105 Park Place.

Kansas City, Mo.

Clemoms-Mason Com. Co., 423 Walnut St.

Buffalo, N. Y.

Batterson & Co., 167 & 169 Scott St.

Hamilton, Ills.

Chas. Dadant & Son.

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Wm. A. Selser, 10 Vine St.

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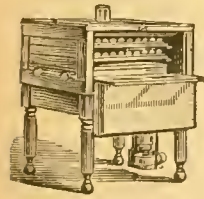

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Rev. Emerson T. Abbott—I never kept any long enough to know. Ask some one who has.

Jas. A. Stone—I have never paid any regard to age so long as they were in good condition.

Eugene Secor—I have never found occasion to change, so long as the old combs were perfect.

C. H. Dibbern—I never change them at all, unless in handling them I find comb that is objectionable.

G. M. Doolittle—I have kept bees for 25 years, and have never yet discarded a comb on account of its age.

J. A. Green—I have never thought it necessary to change any, though I have some that must be 20 years old.

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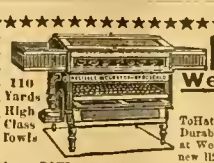
Mrs. Jennie Atchley—I never keep an account of such things, but I use combs 10 years or more old sometimes. I would not change as long as they were good, and the cells not too small. Somehow bees seem to pull through the winter on old combs.



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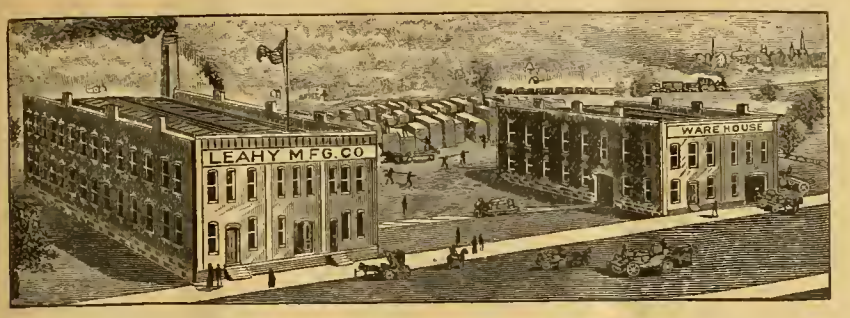

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Heber, Utah, Oct. 9, 1894. J. A. SMITH.

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Doctor's Hints

By DR. PEIRO, Chicago, Ill.

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If you have noises in your ears—hissing, ringing, roaring or buzzing—you may be pretty certain of catarrhal infiltration of the inner ear, and should seek medical advice, at once.

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Tell you when *soap* was first made? Well, Harry, if several of you boys will write me to tell about soap—to show that more than yourself are interested in the subject—I will gladly tell you; and it is something very few people know about.

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Wounds made with three-cornered instruments are said to be more dangerous because it makes such an opening that prevents the free flow of blood, hence the blood is more apt to flow into internal parts.

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Yes, those powder-marks and birth-marks on the face can be removed, but it is quite a slow process. Some persons are greatly disfigured by them.

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General Items.

Will Use a Deeper Frame.

I have read somewhat of the discussion with regard to the merits of the 8 and 10 frame hives; also with reference to deep or shallow frames. My own experience leads me to conclude that 8 frames are enough for most bee-keepers, but make the frames *deeper.* I am making my hives 11¾ deep, as this is about the width of the 12-inch board after both edges are planed, and I shall have my frames made to suit this depth, leaving ⅜-inch bee-space at the bottom. This will give me about the same amount of room as there is in the 10-frame hive with the standard frame. If I do not need all this space, I can contract the the brood-chamber. If I *do* need it, I have it; and, at the same time use the same bottom, cover, and super that I now use.

Newton, N. J. C. H. S.

The "Color Craze" Condemned.

I believe it was I who first, at the St. Joseph convention, "arose to object" to the present "color craze" amongst queen-breeders and apiarists. I am pleased, therefore, to note that out of the 26 expert apiarists answering the question-box conundrums (see page 76), *only one* out of the 20 who have tried the yellow queens think them superior to the 3-banded bees, while the other 19 either pronounce no better or not so good. What Mr. Abbott says, in his answer, about "selling" what people want, and spend no time trying to convince, etc., is well enough as far as it goes, but if queen-breeders had not first extolled these yellow bees, and claimed them better than 3-banders, this color craze had never been inaugurated, and we, as bee-keepers, would have been thousands of dollars better off.

I did not myself mean to condemn the yellow bees simply because they are yellow—that would be foolish. What I object to, and still object to, is breeding for color to the exclusion of useful qualities. Whenever breeders give us queens that are prolific, and whose progeny are industrious, hardy, good comb-builders, and cap their comb white, are gentle and honest, *i. e.,* not inveterate robbers—I say when they have secured all these *practical* points, then, and then only, should they turn their attention to breeding for color. And whenever they find that they must sacrifice any one of, or any part of any one of the above points in order to secure color, they should *halt right there!* Beauty is only "skin deep," and what we want is bees for *business purposes*—not simply insects which are pretty to look at. F. H. RICHARDSON.

La Clede, Mo.

A Yahnke (Not Yankee) Bee-Boy.

I see in the American Bee Journal that two boys write about bees. I am only a boy, too, and like bees very much. I take care of my father's bees. Last spring we had 21 colonies, and increased them to 41. Our main honey crops are from white clover, basswood, and in the fall, along the bottoms of the Mississippi river, are horse-mint, boneset, Spanish-needle, and many other flowers that I don't know the names of.

The honey the bees gathered from the Spanish-needle all candied some before we took it off the hives, so we could not extract it nor sell it in combs, so we had to cut it out of the sections, put it in tin pails, and set them in boiling water until it was all melted. In this way the honey did not lose its flavor.

Our bees had a good flight Dec. 20; the 22nd it turned cold, and the 26th we put the bees into the cellar. It is pretty cold here now, with 20 to 30 degrees below zero, but our bees are resting quite comfortably in the bee-cellar, which is under a barn, but is arranged so that we can walk on level ground into it. This makes it very handy to carry the bees in and out. We have a carrier made out of two poles, so we can set on two hives at once, and it is all two men can carry without jarring the bees.

I like the American Bee Journal very much. EDWARD YAHNKE.

Winona, Minn., Feb. 2.

When to Move South.

I must say the article by A. P. Carlson, on page 92, is very misleading. He says he speaks from experience, for he left Minnesota on June 2, and arrived at Helena, Ark., on June 2, etc. I fail to see anything in Mr. Carlson's letter to show that he has ever been in Texas.

January or February is probably the best time to change from a Northern to Southern climate, but it is an injustice to Texas to make the assertion that it would result in sickness or death to move from the North to Texas in June or July. That this is entirely false is proved every year by the hundreds that come to this State from the North.

I can readily excuse Mr. C. from any intentional wrong, for it appears that he judges the entire South by that place over there on the bank of the Mississippi river, surrounded by the largest swamps known in the United States. It is natural that Mr. C. would not feel kindly toward a place where after two months only 80 out of 1,000 had not been sick. That is a place that I would not like to risk my health in any time of the year.

I was raised in Mississippi, and speak from experience. All that part of Texas lying west of the Brazos is entirely different from any I have seen on the east side. It is high, dry, and healthy. South of the central part of the State there is a Gulf breeze all summer, and it is much cooler here in summer than in the North. The nights are cool and pleasant—hot, sultry nights are unknown here.

So I say with Mrs. Atchley, come when you get ready, it will not make any great difference—certainly no risk of any fatal sickness, and if ordinary precaution is taken, there need be no sickness at all.

I attended the bee-meeting at Beeville, Dec. 27 and 28. I made the trip from here on my bicycle. I saw a great deal of fine country down there, but it is too dry for much farming. W. C. GATHRIGHT.

Cameron, Tex., Jan. 28.

Pointed Hints for All.

I had the pleasure of meeting with the Venango county bee-keepers at their 2nd annual convention on Jan. 28, at Franklin, Pa. To say I was agreeably disappointed is putting the statement mildly. I must say that so far as I can see, I formed the acquaintance of a lot of "gentlemen"—men who take an interest in their business—some veterans, some young men, but all apparently intent on making things interesting, as well as profitable. The time alloted for discussion was like life—entirely "too short"—not giving time enough to discuss the various subjects brought up for consideration. If it is to our interest to meet annually in convention to discuss the best methods of bee-keeping, let us take time enough. Meet promptly at the hour appointed, and proceed to business. This is one point in bee-keeping. The successful apiarist is not the man who puts off his business until the last minute. "Take time by the forelock;" drive your business, don't let it drive you. Don't be a slave to negligence and slothfulness, and then you will not have to entertain your friends with that calamitous howl of "bad luck!" "Time and tide wait for no man," and the

bees don't either, unless it suits their own convenience. Give us a good honey season. That will stimulate to action; activity leads to thought. Honey, action and thought fill our pockets. And then we will not cry out "bad luck!" T. C. KELLY.
Slippery Rock, Pa.

Properly Label the Adulteration.

I don't wish to enter into any controversy with Rev. E. T. Abbott, but I want to say right now that I do not see how he could conscientiously write the article on page 106, headed, "No Use to Hunt the Adulteration," unless he, a friend, or some one else whom he wants to defend, is guilty. I do not want any adulterator trampling on my toes. I would recommend that the law read something like this: "All adulterated honey shall be labeled as such;" then those who sell adulterated honey cannot sell under the reputation that we, the honey-producers, have established. D. S. JENKINS.
Las Animas, Colo.

The Winter in Florida.

We have had an extraordinary winter here in Florida, with great loss in fruit, and fruit-trees and garden-truck; and yet bees are, and have been, carrying in pollen about every day since Dec. 1. The hives are full of brood, and drones on the wing all winter. I have been selling honey all winter, gathered and stored away in the summer time, while I was in Iowa attending to the small honey crop gathered there. It is an easy thing to send good brood-combs down in November, and then take with you a queen and a pound of bees, turn the queen and bees on the empty combs, and the thing is done. Drive out your late weak colonies with insufficient honey for wintering, and bring with you. They will build up and store up a surplus for your use the following winter.
JESSE OREN, M. D.
Daytona, Fla., Feb. 19.

Bee-Keeping in Maine.

The past season here was an extra one as regards honey, clover doing fairly well, basswood excellent, and in the fall golden-rod (which I never knew to yield so much) continued into October; all the brood-frames were packed solid full to the exclusion of brood, which is uncommon here. My bees went into winter quarters with fewer young bees than ever before, but with strong colonies, as I united most of them. I am wintering 15 colonies. I extracted most of the honey, and fed sugar syrup. The yield per colony way about 80 pounds—⅞ comb, and ⅛ extracted. I use chaff hives, and winter my bees on the summer stands. I increase by dividing, and clip all queens as soon as laying. My bees are mostly hybrids, with a few blacks. But few keep bees here, many thinking it doesn't pay any more.
FRANK CHAMPEON.
Exeter, Maine, Feb. 11.

A Plea for Father Langstroth.

I learn, on good authority, that many who have been in the habit of contributing to the Langstroth Fund at the beginning of each year, have not done so yet; and I have reason to think that Father Langstroth feels the omission. What is the matter, friends? Are times so hard that you cannot keep your pledges? or have you forgotten that Father Langstroth is still with us—old, poor, feeble, and in need of friendly aid? I know that the past season has been hard on many; but can we not lop off a little expense here or there, to spare a few dollars? Get out your "A B C of Bee-Culture;" look upon the kind, venerable face of your benefactor, and then think if you have the heart to omit giving your usual contribution, on which he no doubt depends for part of the necessaries and comforts in his old age.

Father Langstroth is now 84 years old. It is not likely that he can remain with us a great while longer. When he is dead and gone, the bee-keepers will perhaps rouse up and put a fine monument on his grave. But what good will that do him? Now is the time when he needs our help. When he is gone, his memory will live in the heart of every true American bee-keeper, with or without any monument to remind us about what he has been to us, and what he has done for us. I am sure that the satisfaction of having done a kind act, where so fully deserved, will amply repay any one for what he may give.

Send your contributions direct to Rev. L. L. Langstroth, 120 Ford Street, Dayton, Ohio, or to the editor of the American Bee Journal, who will forward the money to him. WM. MUTH-RASMUSSEN.
Independence, Calif.

[I hope the foregoing will be heeded, for Editor Root says he "happens to know that the money would not come amiss."

By the way, I notice that Mr. Muth-Rasmussen sent the same "plea" to Gleanings, in which it was printed March 1.—EDITOR.]

Bees Seem All Right.

My bees (25 colonies) are in the cellar, and seem to be all right at present. I shall set them out to fly the first warm spell we get, and will then let them remain out. That is now the practice of the Fox river bee-men in this (Kane) county.
M. M. BALDRIDGE.
St. Charles, Ill., Feb. 21.

Report for 1894, Etc.

I will now give my report for 1894. We had the worst season for 10 years. I commenced in the spring with 125 colonies, and had the most of them in good condition on March 10, when along came a blizzard and killed all of the flowers—redbud and plums, peaches, and all went together. Then came the hard times. Brood was killed, and when it turned warm the bees began to carry out their brood. Then starvation came on—no flowers for three weeks. Our main honey-flow came; the bees were starving, and our colonies were so weak they could not do much in the way of honey-gathering.

I run an out-yard four miles east of my home, where the bees gathered about 40 pounds per colony, in the spring, from holly and basswood, and 45 pounds per colony in the fall—that makes 85 pounds per colony, spring count, in my out-yard.

I reared queens at the home yard, and had several colonies that gathered 50 pounds each.

As I have been testing seven different kinds of hives, I will say that the best all-purpose hive is a hive 12x14 inches, inside measure, and 12 inches deep. Bees winter better, spring better, and gather more to the colony.

I look from Saturday till Saturday for the American Bee Journal. I like it so well that I wish it would come twice a week. It is the best journal in existence.
Ozan, Ark., Jan. 31. J. W. TAYLOR.

A "Deep" Plan for Wintering Bees.

I am an interested reader of the American Bee Journal. Just now the subject claiming the attention of the apiarist is wintering. After reading about the advantages of deep frames and the necessity of using the standard Langstroth frame, it occurred to me, why cannot the advantages of both be combined in this way?—

Take a two-story hive and, if one of eight frames, put four frames within the center of the brood-chamber, and the same number in the upper story directly over those below, making a depth double that of the standard Langstroth frame. On each side put division-boards the depth of both frames, filling in between the walls of both stories and division-boards with chaff cushions. Now put on top of all a super or half-story, and within place the top cushion, using a Hill's device if thought advisable. When restoring the hives to their former condition, previous to the swarming season, I would restore the upper frames to the brood-chamber, being sure to put those having brood within the center.

I became so impressed with this idea that I asked my husband for a colony with which to experiment. He smilingly asked, "If the idea is such an excellent one, would not some of the distinguished apiarists have adopted it long since?" He advised me to ask the Bee Journal about it. Now, will Dr. Miller, or J. A. Golden, who wrote about deep frames recently in the Bee Journal, tell me through its columns if the plan could be put in practice successfully, and oblige a beginner who is eager for information about apiculture?
MARY MARTIN DURBIN.
Groves, Ind.

Convention Notices.

MINNESOTA.—The regular semi-annual meeting of the Southern Minnesota Bee-Keepers' Association will be held on the first Monday in May, 1895, at LaCrescent, Minn. All bee-keepers invited. E. C. CORNWELL, Sec.
Winona, Minn.

UTAH.—The Utah Bee-Keepers' Association will hold their semi-annual meeting on Thursday, April 4, 1895, at 10 a.m., in the Fish Commissioner's rooms in the new city and county building, Salt Lake City.
Provo, Utah. GEO. E. DUDLEY, Sec.

WASHINGTON.—The next meeting of the Western Washington Bee-Keepers' Association will be held on Monday, April 8, 1895. Subjects of interest to bee-keepers will be discussed. Bee-keepers are invited to attend.
Tacoma, Wash. L. D. LITTOOY, Sec.

TEXAS.—The Texas State Bee-Keepers' Association will hold its 17th annual convention at the apiary of W. R. Graham, in Greenville, Tex., on Wednesday and Thursday, April 3 and 4, 1895. All interested are invited to attend. "NO HOTEL BILLS."
Ft. Worth, Tex. DR. WM. R. HOWARD, Sec.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association on March 16, 1895, at Goodno's Hall, in Bronson, Bourbon Co., Kans. It is the annual meeting, and all members are requested to be present, and all bee-keepers are cordially invited. J. C. BALCH, Sec.
Bronson, Kans.

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THE OLDEST BEE-PAPER IN AMERICA

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35th Year. CHICAGO, ILL., MARCH 21, 1895. No. 12.

Contributed Articles.

On Important Apiarian Subjects.

Extracting the Honey From Box-Hives.

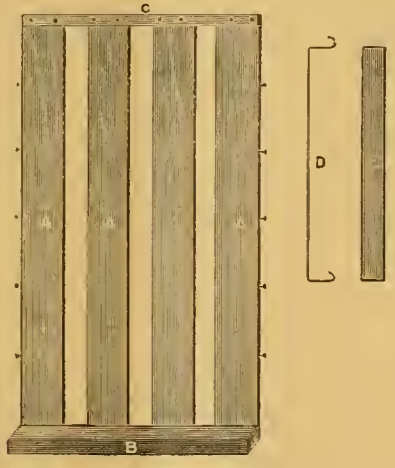
BY I. W. BECKWITH.

I have not seen where any writer, treating on transferring, has thought of extracting the honey; and as I worked over an old apiary the past season and extracted more than 1,000 pounds of honey from those old boxes, I will tell the readers of the American Bee Journal how I did it.

I cut four pieces of lath, A, A, A, A, the length of the hive frames, and a cleat, B, one inch square and as long as the width of the frames, and a small cleat, C, the same length, and nail them together as shown in the illustration; and along the outer edges of the outside lath, drive some small nails about 3 inches apart letting the heads project ¼ inch. A pair of these pallets will be needed, and if one has an assistant two pairs will be required.

I now cut the combs to fit the frames as nearly as practicable, and lay a piece on the pallet so as to rest against the cleat B, and if there is room I put another piece on the pallet resting against the first piece. I now uncap the upper side of these pieces and with a clamp, D, I fasten each piece by laying the clamp across the piece near its upper end and hook it over the projecting nails. The clamp should be narrow enough to bind rather tightly on the comb. I then lift the pallet by the cleat C, and set it in the extractor. After extracting I turn the comb on the pallet, uncap and extract the other side. Any thin board will answer for the pallets instead of lath, but the lighter the better.

For fastening these extracted combs in the frames I use the clamp E. I do not know but bee-keepers generally have



used such clamps, but as far as I know they use pegs, strings and other devices equally unhandy.

There is an abundance of wire suitable for making clamps lying around here, that has been used in baling hay. The clamps should be just large enough to go over the outside of the frames from top to bottom. As soon as the combs are stuck by the bees, the clamps can be taken off and used again.

Grover, Colo.

The True Test of Purity of Queens.

BY H. F. COLEMAN.

The discussion recently going on in Gleanings, as to the effect that a cross between a black drone and a 5-banded Italian queen has upon the markings of the worker progeny,

Mr. R. B. Leahy—See page 188.

revives in my memory a bit of experience along this line. If I remember correctly, I have more than once made mention of it in the columns of the American Bee Journal, but as we soon forget what we see in print, I will give it again, and more in detail.

When I began to Italianize my apiary I procured three tested queens, one of which proved to be a fine breeder, showing queens as fine in color and shape as any I have ever seen. Of course, I reared from my best queen, and reared queens for all my black colonies—22 in number. At this time there were no other Italian bees nearer than 12 miles of me, but black bees were plentiful throughout the county. When the brood from my young queens began to hatch, I was delighted almost beyond measure. At least four-fifths of them produced all 3-banded workers, and as that, according to bee-books, was the test of purely-mated queens, I saw, or thought I saw,

an easy and sure road to success in Italianizing. But my hopes were soon to be blasted.

When I began to rear queens from my young queens, not more than half of those I thought to be purely mated would produce pure Italian queens. I then began to think over the matter, and to read everything I could find on the subject. That there was a mistake somewhere there was no doubt in my mind. My queens had had but two chances to be mated. They had to be either mated from drones from my tested queens, or from the drones of the black bees in the country. If they *were* mated from my Italian drones, why was it that they did not produce pure queens? And if mated from the black drones of the country, why was it that their workers were all 3-banded? I naturally fell into the idea that the production of all 3-banded workers by an Italian queen is not a sure sign that the queen is purely mated; and also that *the only true test* of a pure Italian queen, and that she is purely mated, is the purity of the queens reared from her.

I know that this is not a very favorable picture, but nevertheless, in my opinion, it is the true one, and I am not the only one that is of the same opinion. I have before me the writings of Mrs. Ellen J. Tupper, as published in the Report of Agriculture, page 471, for the year 1865, in which she says:

"By a *pure* queen, I mean one of pure stock, and which has been fertilized by an Italian drone. There has been much stock reared in this country which is *hybrid*. By this I mean that the progeny of a pure Italian queen fertilized by a common drone. This, in the *first generation*, is hard to be distinguished from the pure, but it soon degenerates."

Again she says (page 472): "The only *certain* test that I rely upon (as to the purity of a queen) is the color and markings of a queen's *royal* children, or the queens reared from her. The female bee is invariably like the father, and the queens are the only perfect female bee."

And again Mr. Doolittle, on page 108 of his most excellent work on queen-rearing, says: "To detect any slight contamination of blood in our bees, we must always look to the queen progeny, for the queen is the typical bee of the hive; hence they will show an impurity where the workers and drones would not."

I desire no controversy, but we should get at the truth in this matter, and if the theory herein contained is the true one, does it not follow that no one should sell a queen as a tested queen until it is positively known that she will produce pure queens, and not simply 3-banded workers?

Sneedville, Tenn.

The Land of Flowers in Winter-Time.

BY MRS. L. HARRISON.

I am spending my fourth winter in this section of the "Land of Flowers;" and my experience has been an unusual one. When I arrived in Florida, Dec. 17, the weather was quite warm and summer-like—everything as green as in June, strawberries in bloom, and many pear trees bending down with the second crop of fruit; in fact, it was too warm for the time of the year. There was frost Dec. 27 sufficient to form thin ice, and the 28th the mercury went down to 15° above 0, and the ground was frozen hard; the 29th there was a light frost, and then the weather resumed its normal condition.

Of course, early gardens were killed, and many young trees either killed or badly injured. A large orange tree will stand a good deal of freezing without being permanently injured; a lemon tree is more tender; young fig trees were in many cases killed to the ground. The gardeners determined to recoup their losses, replanted their grounds, and finding their trees less impaired than they had anticipated, were congratulating themselves on their escape, when on Feb. 8 there came another blizzard, and the mercury went as low, and at some points lower, than it did the first time, with much greater injury to gardens, as, the season being advanced, much more had been planted, and in the central and central southern portions of the State there must be great damage to trees, as the sap was flowing upwards, and the buds swelling; in the northern portion of the State, the trees were dormant, or nearly so, and are probably little injured. The loss to the State in the aggregate will be great; but following the advice of Moses to the children of Israel on the banks of the Red Sea, they will "be of good courage, and go forward." Deserving success, they will attain it.

None perished of the cold here, as, alas, was the case with many a poor pioneer in Nebraska and Dakota; and but little physical suffering was endured, as fuel is plenty, and the cold was not of long duration. There is probably no healthier locality than the highlands of west Florida; and our beautiful St. Andrews Bay abounds with fine oysters, and choice fish, of many varieties, such as red fish, pompano, Spanish mackerel, salt water trout, etc. Pears, peaches and plums do finely here, and citrus fruits are a success oftener than a failure.

This is a very good locality for bee-culture, the past season about 40 pounds of surplus honey per hive being taken here, which was accounted ½ of a crop. At Lake Chipola, (near the dead lakes, so called from the many dead cypress, and other dead trees still standing in the water) about 14 miles from the head of East St. Andrews Bay, is a very large apiary, owned by Messrs. Alderman and Roberts. I paid them a visit three years ago, and they had taken the previous season (1891) 250 barrels of honey. If I remember correctly, they had 1,300 colonies in their apiary. Mr. Alderman also had a very fine orange grove which yielded that season 5,000 boxes of oranges. While the soil was quite rich, the location was not a healthy one, there being a good deal of malaria, chills, etc. The residents there said they "could get over the chills or malaria, without taking quinine, just by going down to the bay and staying a few weeks."

Lands in the piney woods north of St. Andrews can be bought quite cheaply—$3 to $10 per acre according to quality and location. There are no manufacturing industries on the bay, and but little day labor to be had; but the settler who can come there with $1,000 or $1,500, can make himself a pleasant and comfortable home, away from the cold and blizzards of the far north.

St. Andrews Bay, Fla., Feb. 11.

No. 5.—The Production of Comb Honey.

BY EMERSON T. ABBOTT.

Before we go any further it may be well to see where we are "at."

We first reached the conclusion that Italian bees were not the best for comb honey on account of their objectionable habit of capping close down on the honey, thus giving the combs a watery appearance. I know that some claim that their Italians do not do this way, and that they produce as white honey as any bees, but this is not the way my Italians cap honey, and, for that matter, I have never seen any that did cap in this way. If anyone has a strain of Italians that invariably produce first-class white comb-honey, I presume, Mr. Publisher, that you will not object if I suggest that now would be a good time for him or her to insert a large advertisement in the American Bee Journal.

I have never seen any bees that capped their honey white, which did not have a large mixture of German or Carniolan blood in them. I thought at one time that a cross between the Italians and Carniolans would be just the bee, but I found some difficulty in keeping up the proper mixture for a sufficient length of time to thoroughly test them. If I should make up my mind in the future to devote my time to the production of comb honey, I should start with a cross between the Germans and Italians, and then introduce some Carniolan blood to add whiteness and reduce the amount of propolis. Italians, as I see things now, are the best for extracted honey, but a cross between the Germans and Italians with a mixture of Carniolan blood is the best for comb honey. I have no such bees for sale.

We have also discussed the subject of hives, and reached the conclusion that a plain 8-frame hive with halved joints, and hanging frames, spaced with a metal spacer, and a loose bottom, is about the best hive for comb honey, all things considered. On this hive I would have supers which have arrangements for holding the sections in the form of pattern slats fitted into them, with presser-board and wedges above them to hold the sections. Over the sections should be placed a thin honey-board with a bee-space under it, and over this a lid that gives at least one inch of space above the honey-board. To make a success of comb honey, one should have a number of these supers, or surplus arrangements, for each hive—at least four, and in some localities more. Thus equipped, the question arises, what is the next thing necessary? I answer,

LOCALITY.

There is no use to try to secure an extra article of comb honey unless the locality is favorable. In the first place the flora should, of course, be such as will produce white honey. Again, it should be of such a character as will give a rapid flow in preference to a lengthy one. It will also be of very great advantage if this flow comes in the early part of the season. The later the flow, the more probability of the bees

propolizing the sections. As a general thing, bees do not gather much propolis until toward fall.

I know of no location better suited to the production of first-class comb honey than the alfalfa regions of Colorado and the West generally. I am told that in some parts of Utah the sweet clover grows so abundantly that it furnishes all the conditions for a first-class article. Where there is an abundance of linden, or basswood, all of the conditions are favorable for whiteness, but the flavor will not compare with that of alfalfa or sweet clover. and as to body, if I may be excused for using the slang, the basswood is not "in it" with the two above-named plants. I have also seen some very fine sage honey from the Pacific coast. Wherever there is a bountiful supply of white clover, if it yields nectar, there will be no trouble to secure a quality of honey that will hold its own in any market. There are, no doubt, other plants and localities which furnish all the favorable conditions, for, of course, I do not pretend to mention, nor even to know about all of them. However, the principles first laid down as to rapidity of flow, etc., will apply to any plant or locality.

Another one of the essentials, and I do not know but it is *the* essential, is a first-class, wide awake man or woman to look after things. No loose-geared, shiftless, lucky-go-easy, run-down-at-the-heel individual will ever be able to put on the market an extra-fine quality of comb honey. Such people, if any there be in the bee-business, would better quit or resort to the extractor. I presume Friend Dadant would say, "Quit," and perhaps he would be about right.

WHEN TO BEGIN.

When is the time to prepare for a crop of this kind? Last fall. It takes bees to gather honey, and in order to have plenty of bees for the next season's work, all of the colonies must be properly looked after the fall before. In order to get the best results out of bees in the summer they must be properly wintered. I do not intend here to enter into any discussion of what is known as the "winter problem," but only desire to say that by some process the colonies must be kept strong and healthy.

Assuming that the bees have passed through the winter all right, and that the spring has opened, then the question arises, what is the first move to be made? This brings us to the subject of

SPRING CARE OF BEES.

To feed or not to feed, that is the question. Well, on general principles I prefer not to feed, yet it is of very great importance that no colony be left to feel the want of food for a single day after the spring opens. They should not only have enough to live on, but enough and some to spare, if they are to build up rapidly. Of course, in these remarks it is taken for granted that the honey-flow is an early one. Where the main crop comes in the fall there is no hurry about building up.

My first choice for spring feeding is surplus combs of honey to be given to the bees in such quantity that they will feel that they have plenty, and at the same time avoid crowding the queen too much, so that she may have room to do her best at laying as the season progresses. If one has no extra combs of honey, and there is not plenty in the hive to more than supply the wants of the colony until the first honey-flow, then one must resort to feeding.

Just here I want to caution all who read this, about beginning to feed too early. Bees are frequently stimulated to activity by feeding so early in the season that they fly out of the hive when it is too cold, and thus wear themselves out and die to no purpose.

I have never found anything better for spring feeding than an oval, wooden butter-dish. They are very handy and cost less than any other kind of a feeder, and having no metal or glass about them, they are not cold. They should be set in the top of the hive, and a couple of sticks laid across each after they are filled with syrup. Turn back one corner of the cloth which covers the brood-nest, so the bees will have access to them, and then put about two thicknesses of newspaper over them, tucking it down snugly around the edges. This will prevent the bees being chilled when they come up after the sugar syrup. I put the syrup in quite warm early in the evening, and then it is all down before morning. If a honey-board is used, a hole bored in the center will answer the purpose, and this can be plugged up with a cork during the winter. Some say feed slowly, but I prefer to give them all they need about as quickly as possible. I think this method will secure the best results.

I have assumed that a live bee-keeper will know just when to expect the honey-flow, and that he will shape his actions accordingly.

St. Joseph, Mo.

Swarming and the Prevention of Increase.

BY JAS. POINDEXTER.

On page 89, "Gleaner" propounds a few questions relating to my plan of preventing increase, as given on page 36. Before answering I will thank him for his compliment on my essay.

As to the number of swarms treated after they had swarmed, it would be difficult to give. I have been practicing the method successfully for 17 years, about 15 of which my two apiaries numbered 200 colonies, with little variation until the winter of 1891–2 they were badly reduced. Since then I have been working almost exclusively for increase.

The number of swarms that reissued was not large. Though more or less, according to the season. The number of queens lost when released was very small—the same precaution being used then as when introducing, that is, to note if there was any hostility of the bees to the queen recage her. The loss of queens and the issuing of swarms with young queens occurred mostly near the close of the honey season, when swarms were less valuable, and I would not be at the bee-yards sometimes more than once or twice a week. In my absence occasionally a swarm would issue and the queen be lost by entering a strange hive. This I take as a fact from purposely leaving some of the queens uncaged awhile where I was present and found that some would not have reached their own hive without assistance.

There is one item not given in the Bee Journal which, if I remember correctly, was in the original essay. (If it was not, it should have been). That was, to destroy the queen-cells before releasing the queen.

It was my purpose in presenting the subject to the State convention, to draw out a more practical method for the prevention of increase; but as I left shortly after, to meet my team, I did not get to hear one given. If "Gleaner" or any one else can give us a better plan during the production of comb honey, let us have it in time to test the coming season.

Bloomington, Ills.

Intense Bee-Culture for the Future.

BY S. S. BUTTS.

I was very much interested in the article in the American Bee Journal by G. M. Doolittle under the caption, "How many bees shall we keep?" For some time I have been revolving the same question. Nearly a year since I suggested that in many sections the bee-pasturage was overstocked, and meant to say further that in my opinion apiarists would make more money if their stock was reduced one-half. But by a slip of the pen I got it a hundred per cent, and you doubtless remember how a certain doctor arose to remark that I would be very severe on the bees! I, however, considered how little it takes to disturb a "straw" man, and decided not to resent the severe charge.

But to return to my subject. Nothing short of thoroughness pays in these times of low prices and sharp competition. Slipshod methods in any business are sure to end in loss and disappointment. I am a farmer, and I know that only intense farming pays. And I am just as certain that anything short of thorough work and skillful management among the bees must result in failure and loss. To be sure, some unsuccessful bee-keepers still remain in the business for the pleasure it affords. Much as I like to be among the willing workers and golden beauties, studying their habits by observation aided by bee-literature, if this pursuit did not enable me to take in a few shekles, its pleasures and charms would vanish like the frost-work before the rising sun.

Earlier, when the field was but partially occupied, before the day of sharp competition, when honey ruled very high, even the careless bee-keeper made some money. Now, from the *alpha* to the *omega* of the business, every detail must be attended to with the greatest precision and care, to secure the grade and amount of honey necessary to success. It can never pay to keep 500 colonies of bees in a certain field to secure 10,000 pounds of honey where 200 colonies would produce the same, with about half the work and expense.

No scrub bees need come into the race. Only those of a high type can ever be a source of much pleasure or profit to their owners. To keep up the standard, and as far as possible raise it, requires knowledge, vigilance and skill. If we could be rid of all the low-grade bees in the country, that are ever contaminating the best blood, and if their owners would give the business over entirely into better hands, then a brighter day would dawn on our pursuit. The standard of bees and bee-keepers advanced, the average grade of honey

would be much finer, and then in this interesting pursuit pleasure and profit would go hand in hand.

One encouragement to the careful, thorough, painstaking apiarist is that the business has become a losing one to all who are doing their work in a careless manner; and, then, poor, neglected, deteriorated bees are passing away, and, by the law of the survival of the fittest, are giving place to those carefully bred up to the standard required by the age. The tendency is to greater knowledge, better methods, better bees, and more intense work, all along the line. Mehoopany, Pa.

Some Habits of Bees.

BY J. W. SOUTHWOOD.

The natural habits of bees are to build comb which contain—worker cells in which to store honey and rear worker-brood, drone-cells in which to rear drone-brood, and when not in use for this purpose, to also store honey, (at least they make use of it for this purpose); and at certain times queen-cells, in which to rear queens.

In every colony of fair normal condition worker-cells are far in excess, so far as numbers are concerned, of either, or both other kinds, as the queen in such a colony can and does so, nearly if not quite, keep up with the comb-building as to supply the cells with worker-eggs, with the exception of a sufficiency to be stored with food for the rearing of the brood. When the queen is able to thus supply the cells as fast as built, the bees, it appears, conclude she is all right. But when she is too enfeebled by age or otherwise, or if the colony is large, and the amount of comb space too large, comparatively, with her ability to that of the comb-builders, then she falls behind, and the bees seem to take knowledge of it, and think she is failing, and therefore contemplate supersedure. And as drones are one-half longer time in being reared than the queen, and being necessary for the fertilization of the forth-coming virgin queen, provided the failing of the queen is such to bring about this condition of affairs, they build drone-comb so as to be ready for the emergency, should it come. When this condition exists, we may expect drone-comb. Those who have used wide starters in brood-frames, one-half, one third, or even less, when hiving swarms can testify.

There must not be given the comb-builders more frames to draw out than the queen can keep pace with in supplying with eggs while the combs are being built, neither should we give wide starters so as to place them ahead of the queen in her egg deposit, unless we desire drone-comb. Of course, if full sheets are given, the cell foundations are all forced, and the bees, thus thwarted, will draw the cell-walls and fill with honey instead of waiting for the queen to fill them with eggs. Their habits are such as to always have a few queen-cells.

Monument City, Ind.

A Visit to Florida and Her Bee-Keepers.

BY WM. A. SELSER.

(Continued from page 68.)

Hawk's Park, just a few miles south of New Smyrna, is the seat of the honey industry of the whole State. It is on the banks of the Hillsboro river, which is very narrow at this point, and the little islands, as well as the east bank of the river, are a perfect bower of mangrove trees. Here Mr. W. S. Hart is one of the most successful honey-producers of this section. His hives, about 100 in number, are located under a bower of grape-vines. His honey-house which adjoins his apiary is two stories. The second story is where he does his extracting; he runs the honey into a tank, where it runs out at the bottom in a very small stream into an adjoining building, which is covered with glass, the sun shining directly through upon a large frame of metal. By a curious device, the honey gradually runs over this and evaporates all water out of it, coming out at the lower end and running into the story below directly into barrels, where they are bunged up and stored away ready to be shipped out. His way of handling hives is too well known to take up space to mention here.

Mr. W. H. Mitchell, the next place, is also a very successful bee-keeper. His crop was about 50 barrels from 60 or 70 colonies. He tiers up in three stories, extracting from the top story. As each story became full, he would lift up and place the empty frames over the brood-frames of the first story. Here is also Mr. Hill, Manager of the South Florida Apiary Company, where they expect in time to have about 2,000 colonies of bees, having about 200 now to start with. The President of this Company is Mr. F. R. Correll, of Titusville, Pa. Mr. Hill's apiary is run largely for comb honey.

Across the river from this place, on the peninsula, are two old bee-keepers by the name of Brown, living in the hammock land. They have two separate houses and are "baching" it. They had quite a lot of bees, but the winds and tides of the year before destroyed most of their colonies. This is a beautiful location, with the Ocean beach on one side and the river on the other. Just south of this place is the apiary of Mr. E. M. Storer, also located on the peninsula and a very successful bee-keeper.

About 12 miles north of New Smyrna is located the apiaries of Mr. J. B. Case, the celebrated queen-rearer of Florida, who tells me his bees gather honey all the year around, except a few weeks in mid-summer. I found him pleasantly located on the river bank and working with his wax, and his loved companion doing some sewing in an adjoining room. Mr. Case took considerable pains to explain to the writer about his queen-rearing process. He works by the Doolittle process, and says that the wax should never be allowed to get too hot, or the cups will be tough; and, in order to keep them moist, in making a lot up ahead, they should be kept in a covered tin box. He had several shades of wax and explained that the color of the wax depends upon the color of the nectar the bees are gathering.

Coming south again, I passed the apiaries of Mr. E. J. Moore, and also Mr. E. G. Hewitt, who has 90 colonies and makes all his honey into wines. We fear he is not a good Prohibitionist, like some of our good Philadelphia bee-keepers.

There are also a large number of bee-keepers just below Hawk's Park; Capt. Barber among the rest, who has had large yields of honey in the past year, but space will not permit to mention the different ones.

Going south from here to Oak Hill, you pass the apiary of Mr. Olson and Mr. E. A. Marsh, situated in the Pine Land, and their honey is largely from the scrub palmetto. At Oak Hill, Capt. T. M. Adams has 120 colonies, and is one of the oldest bee-keepers in this portion of the State. He has a lovely and beautiful vineyard of the native grape, and the writer was entertained royally. Mr. Adams does not consider the ant any greater drawback to bee-culture than the wax-moth. This section from New Smyrna about 20 miles running along the coast, covers the largest percentage of bee-keepers in the State.

A pest, very destructive to apiculture is found along the coasts, in the shape, of a big red ant, which, unless watched very carefully, will destroy whole colonies of bees and take off their stores. They operate by biting the wings of the bees, very often so annoying them that they will swarm out at any and all times, as well as carry away all the honey. They are nocturnal in their habits, and, if watched very carefully at night, they can be traced to their nests and destroyed. The apiarist, by going through the apiary at night and listening for a few seconds at each hive, can detect their presence by a peculiar noise and can trace them to their nests, which are generally under the dead wood. By going around every two weeks, except in mid-summer, in this way, they can be kept in check. The black ant is also of the same nature, but is not so prevalent on the coast as it is inland.

The mosquitoes are also quite a drawback to apiculture, especially in this section of the State. In summer time they become so thick that it is almost impossible to work out-doors, and people are compelled to leave their work and go and find shelter behind netting.

Quite a detriment to the honey in this section is its fermenting so easily, when taken from the barrels. The men say that damp weather is largely the cause of it when the bees are bringing in the honey. The writer is of the opinion, that largely the trouble lies in extracting before the cells are capped. This may be largely overcome, they tell me, by putting the honey in very large narrow tanks and letting it stand several days, drawing it from the bottom.

Quite a few of the bee-men have made mistakes by shipping their honey in whiskey barrels. Oak staves will not answer to ship honey in, as the staves contract and the honey leaks out, but it needs a soft wood like cypress. A firm of Columbia, Ga., make a riff stave barrel, which is one of the best barrels for shipping honey.

On leaving here, one rides a distance of about 40 miles in the cars and comes to the Indian River, so celebrated throughout the world. At this point, Titusville, the river is very wide, fully 3 miles or over at some points. Mr. J. L. Nail, a few miles south at Cocoa, Fla., has 30 colonies, but our poor brother has been confined to his bed for nearly a year with inflammatory rheumatism, and has not had any chance to attend to his apiary.

After leaving here, one gets into the deep sands of the Indian river coast, where it is too hot to raise oranges successfully, and where the sands are too deep to employ horses for

either cultivation or driving use. Here is where the pine-apple belt commences and extends south to a point about 400 miles south of Jacksonville.

Jupiter Narrows—a narrow point in the river where the mangrove grows in large abundance—is where Mr. King's apiary is located, who produces large quantities of mangrove honey.

At Potsdam, where the St. Lucie empties into the Indian river, is where the celebrated Mr. Poppleton has his apiary, about a mile back from the post-office. The writer spent a very pleasant time with this brother, and cannot say enough in praise of his entertainment and his nicely-arranged apiary. Mr. Poppleton is the only one in South Florida who runs entirely a one-story hive for extracting honey, containing 25 frames, same shape as the Langstroth, but not so large. His hives have a curious look, and his apiary presents a unique appearance.

At West Palm Beach, the extreme southern terminus of the East Coast railroad, is where Dr. Henry Stites has his apiary. He has made a complete study of climatic conditions and claims this point one of the most healthy in the United States, having traveled all over this country in the employ of the Government and has written up much about the healthful situations of our country. Wallace R. Moses, an amateur bee-keeper, is also located here.

In taking a sail on Lake Worth—a long lake running for many miles along the coast, divided only from the coast by a small peninsula—you come to the apiary of Mr. M. E. Spencer. While the writer was in his apiary in December, the bees were gathering honey from the Spanish-needle and the cocoanut-palm, as well as the wild pennyroyal. Mr. Saunders, at Mangonia, further up the lake, is a successful bee-keeper of this section.

On going back across the State, one has to traverse for nearly 200 miles the same road. The next point of interest was the apiary of Mr. C. H. Longstreet, at Mount Dora, in the south central part of the State, who takes his bees to New Smyrna every spring and brings them back here in the fall. Mr. Longstreet has been in the bee-business in a good many parts and claims this section one of the best parts of the State. His view of the surrounding country and the little lakes, dotting the view in every direction, forms a beautiful landscape. Mr. Longstreet's son also assists him in his apiary.

The dragon-fly and the mosquito-hawk are quite a drawback to queen-rearing, and are also destructive to new swarms. They fly down on the queens when they are out for their wedding flight and destroy them, and the unsuspecting apiarist does not discover the loss until he finds the bees in his hives all dying out.

In extracting honey, the frames should always be put under the brood-nest, raising the first story and allowing the bees to enter in through the frames. This will protect them from the moth better than placing them over the brood-nest. Another odd device practiced successfully by the apiarists of this State is a box 14 inches long, 8 inches wide, and 4 inches deep, placed on the end of a pole, placing in it a queen with a handful of bees and hanging it out every day during the swarming season. Clipping the queen's wings throughout the apiary, the bees in coming out to swarm will cluster around this box, sometimes hanging in immense clusters 7 or 8 swarms together. The apiarist, going through the apiary and looking in the grass, destroys the queen, and forms one new immense swarm from those around and in the box.

In going west from this point, Tampa City is a very fine place on the west coast. Across Tampa Bay, at St. Petersburg, is Charles Norman's apiary of 50 colonies, and Dr. G. W. Kennedy, the postmaster, also has a few. These are about all that are located in this section.

At Key West, a little over a day's ride south of Tampa City, on the Havana Land, is located the apiary of Mr. Moonger. He has no opposition as Key West is surrounded by the Gulf, and he has no trouble with the bees absconding. He secures quite a large quantity of mangrove and other honeys.

In going north from here, along the west coast, Mr. Plunkett, of Gainesville, Fla., has a large apiary which might be described, but space will not permit.

Philadelphia. Pa.

Making Shingle Roofs for Bee-Hives.

BY H. PEARSON.

I do not know but I may be the first one who has made such a roof as I will describe, and as it is a good one I want the bee-keepers to have it, should they so desire. I saw a similar shaped roof covered with inch boards, but it was too heavy to be handy, so I made 30 shingle roofs in the fall of 1893; I have tested them since, and I think they are the best roof now in use—a fine shelter when the rain pours, and a fine shade when the sun shines hot, light to handle, and pack up snug when not in use. I showed my roof to one bee-keeper, and he made 200 like it soon after. Others may want to know how to make it also, so I will give the directions for making it, as well as I can, and hope many will enjoy using my shingle roof on bee-hives.

Take a piece of timber 2½ feet long by two inches square, which is for the ridge of the roof, upon which nail shingles as follows: Use 18-inch cedar shingles and three-penny wire nails will do. Nail one course of shingle upon the ridge-piece, laying the butts of the shingles even with the side towards you, then lay another course on the same side, but reverse the shingles, laying the thin end towards you, letting it project over the butt of the under course 1½ inches, break joints good, and nail well into the ridge-piece. It is well to draw a pencil mark to lay the butts of the second course of shingles by.

Now take a piece of lath 2½ feet long, place it under the shingle parallel with the ridge-piece one inch towards you from the butt of the last course laid. Now nail through into the lath, driving the nails snug into the bench on which you work, then with a chisel pry the roof up, turn it over, clinch the nails, saw off the tips of the shingles at each end, thus completing one side of the roof.

As you stand facing the bench, take hold of the roof at the ridge-piece, lift it from the bench with the shingle side towards you, the eave hanging down; lay the ridgepiece on the edge of the bench with the shingle down by the side of it. Now lay on another course of shingles with the butts towards you even, covering the ends of the two courses which were sawed off; then lay another course with the tip of shingle towards you, as before; finish with a lath under the eave, saw off the tips at each end, and the roof is nearly complete. Put on top two weather-strips (use lath), nail them well, thus finishing the roof.

If these directions can be fairly understood, I will feel paid for my trouble.

Natural Dam, N. Y.

A Comment On a Florida Article.

BY J. D. COLES.

I read with much interest Mr. W. A. Selser's article on page 67, and I consider it the most honest article ever written about Florida. I feel that it is worth the price of a year's subscription to the "Old Reliable," which makes me feel as if I have missed many good things by not being a subscriber sooner.

In November, 1885, being compelled to go to Florida on account of bronchial trouble, I slung a nucleus colony over my shoulder by a grip-strap, and I located near Lakeland, Polk Co., Fla.

About Jan. 9th, 10th and 11th, I think, the cold snap Mr. Selser speaks of occurring in 1886, froze the oranges on the trees and seriously injured the young trees—bananas, etc. In February, I left Polk County for Tampa, Hillsboro County, in quest of the mangrove. I found the Gulf coast lined with mangrove but killed by the cold to the roots. I found acres of keys (islands) covered with nothing but mangrove. I went down the coast as far as Sarasota, but found no bee-keepers there except old natives (called "crackers") using the bee-gum, and who got their surplus money by knocking the top off of the hive and digging out the honey from top of the hive. I did not see a box set on top of any of the hives to get the surplus. In fact, the crackers were loth to use any but the most primitive mode, I thought.

In Mr. Selser's article, he speaks of saw palmetto 6 to 8 feet high; yes, and on the Gulf coast I saw it 8 to 10 feet high.

I would like to explain the saw palmetto to those who may not know the difference from the cabbage palmeto. The cabbage palmetto is a noble looking tree, viewed from the distance; straight as an arrow, from 40 to 60 feet before there is a leaf or branch. In fact, it has no branches, but leaves grow out of the body of the tree, forming a sphere not unlike a cabbage head on a long stalk. The saw palmetto grows from roots, not unlike calamus roots, some of them as thick as a man's thigh.

Now, Mr. Selser did you or the printer make the mistake, that New Smyrna is on Hillsboro river? I found Tampa, in Hillsboro county, on the Hillsboro river, emptying in Hillsboro bay, emptying into Tampa bay, emptying into the Gulf of Mexico. Or am I mistaken, and are there two Hillsboro rivers in the piney woods of sunny land?

Woodstown, N. J.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

When to Get Bees by the Pound.

What month would be the best to buy bees by the pound? Does it pay to get them early and feed on drawn-out combs, or wait until the bees are gathering honey? H. S. J.

ANSWER.—Probably you will do best not to get them till bees get fairly to work gathering, say in fruit-bloom.

The 8-Frame Hive and a Queen's Laying Capacity.

When a queen lays on an average of 3,000 eggs per day during the busy season (as I have seen stated in the Bee Journal), how does she find room enough in an 8-frame hive of the standard size to keep her busy the 21 days? What does she do with the surplus? Maybe I ought to have her lay in my hand, like Mrs. Atchley does. WISCONSIN.

ANSWER.—Now, look here, if you don't stop asking "sassy" questions, I'll come up to Wisconsin and see to you.

Let's see. If we figure 3,000 a day for 21 days, and have 8 frames in a hive, that will make about 160 square inches in each frame to be filled with eggs. But there are not more than about 140 inches in a comb, so a queen can't keep up the 3,000 even if she wants to. I suspect some queens might keep up to that mark, and being cramped for room must limit the number. Others would have room enough in the 8 frames. There is a very serious side to the matter if, as some one has suggested, the repression of the laying has an injurious effect on the queen herself. More light on the matter is desirable.

Distance Bees Go for Honey.

How far will bees successfully gather honey? I think I once saw in the Canadian Bee Journal that bees had been known to gather buckwheat honey nine miles from the apiary, but I could not believe it. There is an abundance of pasture four miles from here, but can my bees get at it?

Victoria, B. C. E. L. E.

ANSWER.—I think it has been pretty well authenticated that bees have gone nine miles to gather, but whether profitably is quite another thing. If there is no pasture nearer, I think your bees will go the four miles, and if some rapid yielder like linden is there they may profit considerably by it.

Feeding Colonies Short of Stores.

I have 3 colonies of bees that are short of stores. How will it do to take the outside frame and fill it full of syrup and set it back? Will it do any harm to the bees? I have 19 colonies, and 16 are all right and in fine condition. We are having a blizzard to-day. J. V. E.

Lebanon, Ind., March 4.

ANSWER.—As late in the spring as this, it will work all right. You can feed almost anything but poison to bees when they have a chance to fly every few days.

Queen and Extracted Honey Questions.

1. On Aug. 10, 1894, I received three untested queens from a reliable queen-breeder of this State. In introducing them, two were balled, but were soon liberated again. Then at the second trial they were received all right. Now, one of those queens never laid an egg, as I could find, although she appeared strong and vigorous in every way, and was almost solid yellow; and although I gave the colony eggs and brood at various times, they never attempted to rear another queen. If she should live through the winter, is she likely to be any good in the spring?

2. About Aug. 10 I commenced extracting buckwheat honey, and continued for nearly a month, or until Sept. 5. The first extracting kept liquid until after the last extracted was candied solid. What could have been the difference, as none was extracted until the bees had commenced sealing the the cells? G. F.

Rosemount, Minn.

ANSWERS.—1. No one can tell till spring. She may be all right, and she may be worthless.

2. The difference is in the honey itself. Some honey candies as soon as extracted, and some never candies.

Carniolans Compared With Italians.

1. Are the gray Carniolan bees hardier and better to winter than Italian bees? 2. Are they as gentle as the Italian bees? 3. Do they gather as much honey? 4. Do they swarm much? 5. Are they as large and beautiful as Italians? P. W.

ANSWERS.—1. About the same. 2. Some are cross, but in general I think they are gentler than Italians. 3. Probably about the same. 4. They have the reputation of being great swarmers. 5. At first sight you'd probably call them common black bees, and possibly at last sight.

Tin or Galvanized Iron for Honey-Tanks.

Which is best for extractors and honey-tanks, tin or galvanized iron? What is the objection to galvanized iron? E. C. B.

ANSWER.—For extractors, tin is generally used, I think, probably because lighter. For tanks, galvanized iron is much used. Last year the question of danger from galvanized iron was thoroughly discussed in Gleanings, the publishers going to the pains of having an analysis of honey made after being a long time stored in galvanized iron. The general outcome seemed to be that it was quite safe, although cases were reported in which thin sour honey had apparently a bad result. For decent honey it's probably all right.

A Question on Supering.

In working for comb honey, what advantage is their in lifting the partly-filled super and putting the empty super underneath? Why not put the empty super on top, and have less partly-filled sections at the close of the honey season? J. A. E.

ANSWER.—Bees commence work sooner if the empty super is put under. But toward the last of the season, when you think its doubtful if they will do much more, then put the empty super on top.

Feeding Bees—Sugar for Best Bee-Food.

1. Is it a good plan to have open feeders off a few paces from the hives, and let all the bees go to it on warm days, when they are flying about?

2. What sugar makes the best food for bees?

3. When should a person feed—early in the spring before the first honey-flow, or after honey begins to be gathered? J. J. W.

ANSWERS.—1. That's practiced by some, but I think not as much as formerly. One objection is that you're feeding your neighbors' bees as well as your own. Another is, that the strong colonies get the lion's share, but I don't know that there's any great harm in that if there is plenty for all.

2. Granulated is generally used.

3. Unless bees are short of stores, it's perhaps best not to feed until they commence to gather, and then only when the flowers don't yield enough.

Keeping Queens—Selling Extracted and Comb Honey.

1. How are queens reared and *kept* for sale or use? I have read several bee-books, and they do not tell how to keep them?

2. I have 50 colonies now, and would like to know if you think I can sell extracted honey as well as if in the comb. I have some trouble in selling my comb honey even at 9 or 10 cents. Would you advise me to buy an extractor, or is extracted honey more difficult to sell than comb? I am iving

here in this out-of-the-way place, and never saw a bee-paper till 1895, and now I think I would not keep bees without it.
Stephen's City, Va. W. H. H.

ANSWERS.—1. Queens are generally kept in nuclei, a nucleus being nothing more or less than a small colony. The nucleus may have small frames, but oftener frames of full size are used. A queen may be kept a month or more in a cage with 10 or 20 workers.

2. As a general rule, comb honey will sell more readily than extracted, at least comb usually sells for the higher price. It is quite possible, however, that in your place you might be able to sell the extracted for as much as the comb. I'm just a little afraid that your comb honey isn't in the best shape, and if it's such a dauby mess as is sometimes seen, a good article of extracted honey nicely put up in glass or tin might easily outsell it. Nice white section honey, however, ought not to go begging for purchasers.

Black Gum—Extracting—Starters in Wired Frames.

1. Does black gum produce honey to any amount? If so, what color?
2. Can you extract from brood-frames 14x10½ without their being injured if not wired?
3. Can you use starters in wired frames so the bees will make straight combs? W. C. K.

ANSWERS.—1. Black gum is considered a good honey-plant in the South, but I don't know anything about the color. Perhaps some one will tell us about it.

2. Yes, only you must be very careful with them when they're new. If a comb is quite heavy with honey, turn slowly till that side is half emptied, then reverse your comb, turn slowly till that side is half emptied, then increase your speed sufficiently to empty the rest, then reverse again and finish the side you did first.

3. I think I've read something of the kind, but in the few cases in which my bees were asked to do it they didn't make a success of it. I wouldn't advise it.

Mice in Bee-Hives—Sweet Clover.

1. How long will mice live in a hive without water, if they were closed in with wire-screen? Would they die of thirst.
2. Will sweet clover grow in a wood lot where there are not many trees, and plenty of marsh grass? Does it make good pasture for stock? F. E. G.
Racy, Mich.

ANSWERS —1. I never tried it, but I don't believe they'd die of thirst. There's generally moisture on the walls of the hive, also in the honey.

2. I think it will grow there all right. It doesn't seem to be much relished by stock till they get accustomed to it, but a good many report success after stock are used to it. I have no trouble in getting stock to eat the dry hay. Lately I saw one place mentioned where cattle preferred sweet clover to Alsike, when both were in the same field.

Putting Bees Out for a Flight.

What is the result of taking bees affected with diarrhea out of the cellar for a flight at this time of the year, if the weather is warm? How warm should it be? Is there any better way to treat them? E. M. H.
Kilbourn City, Wis.

ANSWER.—If they're not very bad, I should rather let them stick it out till weather comes for them to say out. But if very bad, it may do to take them out in bright sunshine with no wind when the thermometer gets up to 50° in the shade. They will fly out at a lower temperature, but they may not always get back. You may do a lot of good by seeing to the air of the cellar. If the thermometer in the cellar shows above 45°, you can at night let in outside air enough to bring it down to 40°, and this will give them fresh air—a thing that may be much needed. If a warm night comes, open wide all the windows and doors of the cellar, and although at first they may roar and run all over the hives, by morning they will be quiet. Possibly you can leave the cellar open the next day, but keep watch, and if the bees begin to fly from the hives darken up again.

The Sunny Southland.

CONDUCTED BY

MRS. JENNIE ATCHLEY, BEEVILLE, TEX.

The Carniolan Bees.

MRS. ATCHLEY:—Will you please tell me what kind of bees Carniolans are? How do they differ from other bees?
Pike, Texas. J. M. JEFFCOAT.

Friend J., I have just described the Carniolan bees for another bee-keeper, in the American Bee Journal, and I trust you have read it ere this. Carniolans are a dark gray bee, stick to their combs like Italians, and unless you were acquainted with them you would likely pronounce them blacks, but they have hardly any of the traits of the blacks. They are usually very gentle, good honey-gatherers, and build up very fast.

Facing the Hives Differently.

MRS. ATCHLEY:—Last year was my first to keep bees. I have 88 colonies, and they had plenty of honey to winter on. The hives I got with the bees are the old-time Simplicity, with the wire-end frames, and I am doing away with them as fast as I can. The new hives I am using are of my own get up, and I think it just as good as the dovetailed hive. I also make a closed end-bar that I like much better than the wire end-bars.

We have plenty of linden here in reach of the bees, though it did no good last season.

My hives face the east, and I want them to face the south, so I can have a better view of them from the honey-house and work-shop. At what time of the year would it be best to turn them half around? And how much at a time?

Last season was a very poor one here for honey, caused by the cold spell last March, and drouth in summer.

My bee-yard is on a gentle rise, and open all around in a grove of pines. I intend to make it just as pretty as a park, with one more year's work. J. W. BURROWS.
Smithton, Ark.

Friend Burrows, I would turn the hives ⅛ the way around at first, and then in a few days turn the other ½. This done when the bees are flying will cause but little trouble or inconvenience to the bees. Why do you want them to face all one way? I have my hives face in almost all directions, and like it better, but if you have your hives a good distance apart, it will be all right to have them face all one way.

Using Foul-Broody Hives.

MRS. ATCHLEY:—One year ago I bought 11 colonies, and also a lot of hives that had been vacated, as I was told, by the bees dying of starvation, and by uniting for winter. Some of these had nice combs, and when I undertook to divide a colony later in the season, I gave each one (the parent colony and the swarm) several of these empty combs. I find now that the bees died from foul brood, and in my ignorance I used all the rest of the empty combs, spreading the disease.

I had a gift of all the hives and fixtures of a fine apiary, and on examination I found that these bees had also been exterminated by the plague. To-day (Jan. 21) I have only one colony left, and I suppose they are infected also. Now, can I do anything to those hives, to rid them of the disease and make it safe to put another colony into them?

Please tell me in your reply what you think would be advisable under the circumstances, where one is not able to destroy the hives and replace by new ones unless it is absolutely necessary. I intend to keep bees if it is possible, and as I have the hives all painted and fixed in fine shape, I feel somewhat anxious to discover what others would do in the case.
Weston, Ohio. N. T. SMITH.

Friend Smith, I think you will be perfectly safe in using your hives if you will let them remain exposed to freezing weather, then scald them well and paint the inside as well as the outside; also scald the frames *well* after they have been thoroughly scraped. I would feel safe in using the hives after such treatment. I tell you, it was bad luck to you, sure enough, when you accepted that gift. I would destroy that remaining colony and start anew.

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REV. EMERSON T. ABBOTT - - "NOTES AND COMMENTS."

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Editorial Budget.

Florida.—Those interested in Florida will find several contributed articles in this number of the Bee Journal, on bee-keeping in that region. Mr. Selser, on page 184, and Mrs. Harison, page 182, tell some of their personal observations in the sunny "Land of Flowers."

Mixed Journalism is the subject of an editorial in Gleanings for March 1. Editor Root says: "The fact seems to be, that in spite of certain criticisms that seem to break out here and there, the bee-papers that adhere *strictly* to the subject of bees, do not enjoy the circulation of those that have added subjects foreign to bee-keeping."

Then further on in the same editorial Mr. Root remarks, in referring to Gleanings publishing so much religious and gardening matter: "If they [subscribers] do not like those subjects they do not need to read them, or even take the journal [Gleanings] at all, for there are very excellent bee-papers that confine themselves strictly to bees."

But, after all, the bee-matter alone in any of the bee-papers is worth many times the annual subscription price asked. The great trouble is that so many of the so-called bee-folks don't read any bee-paper at all. The "know it all" apiarists will never know how little they know till they begin to read. But then, "Where ignorance is bliss," etc.

However, every enlightened bee-keeper should strive to spread apicultural knowledge as widely as possible.

The Postponed Chicago Meeting.—I have received the following letter from Jas. A. Stone, Secretary of the Illinois State Bee-Keepers' Association, which explains itself:

BRADFORDTON, Ill., March 7, 1895.

DEAR BRO. YORK:—As I do not get the Review, I knew nothing of what was said in it regarding the omission of our Chicago meeting of the bee-keepers last fall—except what Gleaner gave on page 121—until I received a copy of the Review from Mr. Hutchinson, and a letter from him enclosing one from my Friend Robbins, of Mechanicsburg, Ill., defending us (thanks to Robbins) for not having the meeting.

We were in correspondence with some of our Chicago friends all last summer, and had them on the lookout for some occasion when railroad rates would be given so we could hold the meeting and have a good, long time to advertise. We did not want to have another meeting, and because of a failure to get the required hundred, lose our reduced rates, as we have done on one occasion at Springfield, when they required 250 in attendance to get the rates.

As no opportunity of this kind was in sight, and it was getting late, one of our northern friends suggested, as the season had been so poor, and times hard, that we postpone it for that year, and, all who could, scrape their cash together and attend the St. Joseph meeting of the North American.

The matter was presented at the Springfield meeting, and a long discussion on the same followed, and it was not fully decided not to have it, if the way was clear; and if our northern brethren wanted it, it should be held. As all held their peace, we naturally supposed the poor honey-year had caused them to lose their faith in their pursuit, and your Secretary has been a little disheartened at times, for what he thought seemed to be a lack of interest on the part of bee-keepers. But now he is thankful that this thing has occurred, and for the agitation it has caused, for he is more assured than ever of a deep interest among bee-keepers.

Our Springfield meeting is set for Nov. 19 and 20, 1895, on account of the meeting of the Odd Fellows at that date, when standing railroad rates are given to all. But we may change that, when we find what date the State Board of Agriculture fixes the Fat Stock Show, at Chicago, and have the Chicago meeting in November, and the Springfield meeting in January, 1896, when the Illinois Live Stock Breeders' Association meets. We will give notice at the earliest possible date.

JAS. A. STONE, *Sec.*

Under the existing circumstances, I believe the Executive Committee af the Illinois State Bee-Keepers' Association did the right thing in omitting the meeting in Chicago last fall, but of course the omission need not occur again, unless it be again thought best. Mr. Stone's explanation is quite full, and doubtless will satisfactorily answer all who wished to know the whys and the wherefores about it.

In this connection, I may say that there has lately been some hint of renewing the old, or starting a new, Northwestern Bee-Keepers' Society, which in years gone by held such a successful meeting here in Chicago every fall. If it can be done, so as not to interfere with the workings of the Illinois State Association, I am in favor of it. If it might be possible to hold the State convention in Chicago in the Spring, it would then not interfere to hold the Northwestern in the fall. I wonder if some such arrangement could be made.

Suppose those who are interested in the proposed reviving of the Northwestern, just write what they think of it, and then opinions can be compared. The American Bee Journal would not urge or hinder any plans, but only wishes to help in whatever is thought best by the majority.

A B C of Bee-Culture.—This is the fine cyclopedia of bee-keeping by A. I. Root, containing 400 pages and nearly 200 engravings. The regular price is $1.25, postpaid, but until April 20 we make the following very liberal clubbing offers on this book: The American Bee Journal one year and the "A B C" bound in cloth—both for only $1.80; or the parchment cover (very heavy paper) "A B C" and the American Bee Journal one year—both together only $1.50. Remember, April 20 is the limit on these offers. Better order at once if you want a copy of this excellent bee-book.

Mr. R. B. Leahy.

Mr. R. B. Leahy, the editor of the Progressive Bee-Keeper, was born June 13, 1857, at Port Richmond, N. Y., his mother dying when he was a baby. At the age of three years he was taken to a new home at Baiting Hollow, N. Y., and lived there with a stepmother until nearly nine years old, when his father was drowned. This practically left him alone in the world to look after himself. His father was a sea captain, and young Leahy had spent a few months on the ocean

with him the year before his death. After his father's death the home was broken up, the youthful Leahy took a position as cabin boy, and the time between the ages of 9 and 21 years he continued on the sea. He has been across the Atlantic ocean eight times, and visited more than half of the foreign countries. Three years of his sea life was spent in the United States Navy.

Since getting back to dry land again, Mr. Leahy has been occupied as follows: He spent one year as conductor on a railroad in New York, and then went "West;" worked as a farm hand in Illinois one year, and then rented a farm and worked for himself three years more. At the age of 24 he married Miss Henrietta Braentigam, of Belleville, Ills. They have had but one child, and lost it in its infancy.

In 1882 Mr. Leahy purchased 5 box-hives of bees at a sale, then transferred four of the five into modern hives, and being late in the season they all died the following winter. The next year, being a good one, he increased the one colony to 18, and developed the worst case of "bee-fever" ever heard of—one that even Dr. Peiro could not cure. But while the bees had done well, other misfortunes overtook him, and in December, 1883, he gave the bees to a doctor to pay part of his bill, then went around to see the other parties he owed, and promised to pay them too soon.

He then went to Higginsville, Mo., with his mind made up to find some one that had box-hives, and interest them with the new "fixin's," and he succeeded. He has worked hard for ten years to make a bee-keeper of himself, also to build up a supply business, and is now manager of the Leahy Manufacturing Company—a nucleus of which he started ten years ago with a foot-power saw.

Mr. Leahy has been three times elected president of the Missouri State Bee-Keepers' Association, and once vice-president of the Northwestern Bee-Keepers' Association. He has held many other positions of honor, but they are not pertaining to bees, hence they do not necessarily belong here.

The Leahy Manufacturing Company is the largest company of its kind west of the Mississippi river, having a capital of $24,000. To the young men that think times are hard, and work scarce, Mr. Leahy says that there is plenty of room yet for those who have the snap and push.

I am glad of this opportunity to give the picture (see first page) of my friend and brother editor, and something about his life history. In view of his early struggles, his subsequent success should serve to encourage every young man who thinks he has a "hard time of it." THE EDITOR.

Back Numbers for 1895 we can furnish to new subscribers until further notice, if they will let us know when subscribing. We will begin the subscription Jan. 1, 1895, if you say so when sending $1.00 for a year's subscription.

Canadian Beedom.

Conducted by "BEE-MASTER."

Writing for Bee-Keepers.

"No one can write for bee-keepers but *bee-keepers*," says the British Bee Journal. But how many colonies must a bee-keeper have to qualify him as a writer on the subject? Mr. Heddon speaks disparagingly of Mr. Doolittle because he only keeps 60 colonies.

Handling Bees in Cold Weather.

S. A. Green says: "In brushing bees off combs when it's too cold for them to crawl back into the hive, put two or three bottomless hive-bodies over the hive and brush the bees into this as a funnel." But what does he or any other sensible bee-keeper want to brush bees off combs for in such weather? Better give them a good letting alone. They soon get benumbed and stupid when exposed to cold, and will hardly find their way back to the hive when shot through a funnel as the one described.

Bee-Literature of 1861 and 1895 Compared.

"Apicultural literature was never better than it is to-day," is the modest opinion of W. Z. Hutchinson, one of the men who edits a bee-paper. "Right you are," say the editors of Gleanings, American Bee Journal, and Dr. Miller. Gentlemen, have you ever seen Vol. I, of the American Bee Journal, published in 1861? For solid, useful contents, it has never yet been excelled, if equalled. But in 1895, apicultural literature should be a great deal better than it was in 1861, or else not brag of its wonderful excellence.

Below Zero Weather.

We may expect when spring opens to get doleful narratives about bee-mortality from the colder portions of Canadian beedom. Even along the parallel of 43°, the mercury went down as low as 25° and 30° below zero, and that not for a brief dip merely, but for a day or two at a time, and for several nights in succession. The "happy-go-lucky" class of bee-keepers who did not make thorough work of packing their colonies for winter, will have sorrowful obituaries to record concerning their "little pets."

Drones From Virgin Queens.

I see in the American Bee Journal of Dec. 6, 1894, page 719, that Mr. John McArthur has been experimenting with drones from laying workers and seems to think it a success. Well, I tried with drones from virgin queens and the thing won't work. I reasoned that if all the drones from a pure Italian queen are all pure Italian drones, although she was mated with a black drone, (the drone-eggs not being impregnated) why are not the drones from a virgin queen just as good as any?

Well, I reared two nice Italian queens late in the fall, and as soon as hatched I clipped their wings so they could not possibly get mated. Before I put them in winter quarters they commenced to lay, so I put plenty of drone-combs in the hives. Now, I thought I would have lots of pure Italian drones in the spring, and so I had, in all stages from the eggs to full-sized drones. But as soon as I set them on the summer stands the bees commenced to kill off the drones, so I killed the queens and the bees stopped killing the drones. I soon had lots of as nice Italian drones as need be.

Then I reared a lot of queens from my best Italian queen, and they were flying out with my nice drones for nearly three weeks and did not get fertilized until the natural drones commenced to fly. They all got mated with black drones and their breed was all hybrid. I had at that time over a 100 colonies of black bees and only a few Italian queens, so I concluded the theory of drone-eggs not being influenced by the impregnation of the queen, was all bosh. But I never thought of trying drones from laying-workers, and don't think I ever will.—W. C. Wells, in Canadian Bee Journal.

Nova Scotia Bee-Keepers' Association.

The third annal meeting of this Association was held at Wolfville, Dec. 31, 1894. Among those present were Prof. Craig of the Experimental Farm, Ottawa; Dr. A. P. Reid, Halifax, and Prof. Fraville, of the Horticultural School, Wolfville. The address by the President, J. B. Davison, was very instructive, and a vote of thanks was tendered him for his able discourse.

Prof. Craig addressed the meeting, giving the Association every encouragement and dwelling upon the bee-keeping resources of this province. Prof. Fraville also spoke at length upon the scientific points of apiculture, and the relation between horticulture and bee-keeping.

All listened with great interest to the address of Dr. A. P. Reid, who advised that the members take steps to bring the subject of bees and bee-keeping more before the public, and, as he said, very few people knew anything about the habits and management of the honey-bee, almost everyone thinking

that because the bee has a sting, that therefore it will use that sting whenever opportunity offers. Now, such is not the case, 99 out of every 100 persons would be surprised to see a practical bee-keeper open the hive and handle the bees as if they were house-flies.

The subject of granulation of honey was another item about which few people know anything. They think because the honey crystallizes, that it must be sugar, and therefore the honey-business suffers; the public should know that nearly all pure liquid honey granulates. The President thanked Dr. Reid and promised that the Association would take steps in the direction proposed.

Several members entered into a discussion about the size of brood-frames. Some are using the Gallup and others the Langstroth frames; each were in favor of their respective styles. The election of officers for the ensuing year, resulted as follows: President, E. F. Beeler, Berwick; 1st Vice-Pres., Rev. P. S. McGregor, Hantsport; 2nd Vice-Pres., E. S. Goudge, Halifax; and Sec'y-Treas., J. H. Cox, Cambridge Station.

The convention then adjourned to meet at Berwick next June, at the call of the President who promised to entertain the members, and to give them some practical instruction in queen-rearing. Mr. Beeler is considered the best informed bee-keeper in Nova Scotia.—The Acadian Record.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Why Soft.—"By inserting a cake of properly made soft candy right over the cluster, and covering all warmly down to retain the heat, many a colony will be saved."—Editorial in British Bee Journal.

I am at a loss to know why so many people have an idea that candy must be *soft* when given to the bees for winter food. I have used sugar-cakes made out of granulated sugar for a number of years, and I make the cakes as hard as I can make them, and put nothing in the mixture but sugar and water. The harder it is the better it will be. The bees will look after the softening of it all right, if it is put directly over the cluster, When it is put on too soft, it is apt to run down and smear the bees.

I notice in a paper sent me from Michigan the other day, that a writer says my plan will not work in Michigan. It will work *any place* if properly done. This writer further says that I do not mention diarrhea in talking of this plan, and seems to be greatly troubled about it. I had no occasion to mention it, for bees never have anything of the kind when wintered on sugar candy. I opened a colony a few days ago that had a cake of sugar on them, to see how they were coming on, and the way they bulged out when the cloth was lifted indicated that they were not troubled very much about the candy being hard, nor from any disease known to bee-keepers. This, too, after about three weeks of very cold weather, the mercury ranging from 10 to 20 below zero. Give your bees candy, but be sure it is not soft.

Must be a Mistake.—"Bees seldom work on the strawberry blossoms. I think the wind is the chief agent in pollination."—Eugene Secor.

There must be some mistake about this, for I am quite sure there is no fruit which needs the bee more in order to secure perfect maturity. In the strawberry the effects of pollination extend beyond the fruit itself, and affect the receptacle, causing it to enlarge and become rich and juicy. Most people know that the part of the strawberry which makes it edible is the enlarged receptacle, and the real fruit are what are commonly called seeds—botanists call them "achenia." Now there are from one to two hundred of these on each receptacle, and each one of them requires a separate fertilizer, or else the receptacle will not be stimulated to activity, and will remain green and hard. Any one, by examination, may see these green, hard places in strawberries caused by imperfect fertilization. Many varieties are *dioecious*, that is, they have the anthers, or male element, on one plant, and the stigmas, or female element, on another; but where they are perfect and have both stamens and pistils, the stigma matures and becomes receptive before any pollen is produced, and even such flowers must depend upon others, that are more advanced, for fertilization.

If one will stop and think for a moment how important pollination is in this case, and how difficult it would be for the wind to act as a pollen-bearer where so many little stigmas in one flower await the coming of the vitalizing dust, I think he will rightly conclude that this very important work cannot be left to the sole care of any element which has such a reputation for fickleness as has the wind. Then, it has been my observation that bees do visit strawberries in abundance. Why should they not? The strawberry yields both nectar and pollen. The existence of the nectar alone would be sufficient evidence that the plant is visited by some nectar-loving insect, if we had no other proof. The berry needs the bee, and the bee needs the nectar, and you can rest assured that they find each other.

Among the Bee-Papers

Conducted by "GLEANER."

WHAT CAUSES BEE-PARALYSIS?

In Gleanings, J. Baldensperger thinks the queen has nothing to do with it, nor the food, but possibly the hives being *too* well protected against cold—"no airing on top, the sweat causing the mischief." T. S. Ford thinks humidity may have something to do with it. Dr. J. P. H. Brown conjectures that in the South the trouble may arise from the bees sucking the juices of decaying melons.

A VETERAN BRIMSTONING HIS BEES.

T. P. Andrews, of Illinois, reports in Gleanings that the pasturage and seasons have so changed that summer feeding has become the rule. He says: "My surplus for the past five years has averaged annually only about 15 ponnds per colony of extracted honey. I have reduced, in the past three years, from 300 colonies down to about 140, without much effort on my part until last fall, when I brimstoned 55 of the least valuable of the colonies after extracting the honey."

SWEET CLOVER FOR TANNERS.

It may surprise many to learn that the sweet clover plant is of immense value to tanners of leather. A practical tanner, an expert in his profession, assures me that the fraternity can richly afford to pay 10 cts. per pound, or $200 per ton, for the sweet-clover plant when properly prepared for their use.—M. M. Baldridge in Gleanings.

ADULTERATION IN BEESWAX.

The A. I. Root Co. has been "taken in" with some beeswax adulterated with paraffine, and a sample being sent to Chas. Dadant & Son they reply; "We must say that at first sight we should have been taken in, for it smells and looks like pure beeswax. A careful test, however, by the alcohol and water test showed that it has a lighter specific gravity than average beeswax." Look out for wax that has been remelted.

LARGE VERSUS SMALL HIVES.

The editor of Gleanings says that among other things learned from the discussion as to the size of hives, he has learned that more bee-keepers than were supposed are using large brood-nests; that at least some using eight frames might do better with 10 or 12; and that in colder climates with one main honey-flow in June and July with very little fall-flow, the eight-frame size seems to be used most, while in warm climates with long seasons a large brood-nest of 10, 12, and 16 frame capacity seems to have the preference.

SIZE OF HIVES AND FRAMES.

Perhaps the continual discussion of the above topic may arise from the fact that different places and conditions demand different sizes. At any rate, if the matter is ever to be settled it will more likely be by actual experiment than by theorizing. There's no objection, of course, to the theorizing and the experimenting going on together. W. C. Gathright, on page 148, thinks a certain line of experiment is advisable. Now the thing for Mr. Gathright to do is to go right to work in the direction he thinks leads to profit—have a given number of the preferable size run side by side with the same number of the old kind, tell us the result at the end of the season, and after having done that for perhaps three years we would know something about what was best for him, and possibly for others.

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General Items.

Bees Appear All Right.

Mr. Smith winters his bees on the summer stands. He was out among them this morning to see how they stood the severe storm we have just passed through. He said they appeared to be all alive, and doing as well or better than one would expect. I hope we have seen the last of Old Winter, or at least of the terrible cold weather.

A word for the Bee Journal: It appears to us to grow better as it grows older, and we would not know how to do without it, at least while we keep bees.

MRS. L. M. SMITH.

Canandaigua, N. Y., Feb. 15.

Zero Weather in North Carolina.

The ground here has been frozen nearly every morning since Christmas, and my bees have not had a good flight since about Feb. 1. For nearly three weeks the ground has been covered with snow, with zero weather part of the time.

W. H. PRIDGEN.

Creek, N. C., Feb. 22.

Had a Good Rain.

A most welcome, refreshing visitor came last night and to-day. It commenced to rain last night, and kept raining for 24 hours steady. We have had a very nice winter so far, the coldest being 20 degrees below zero, but that lasted only a few days, but I think it was very severe for the unprotected bees on the summer stands. I winter mine in the cellar, and they are doing finely. I have 14 colonies in 10-frame Simplicity hives, and the self-spacing Hoffman frames. I failed to find anything better for this locality.

I bought 3 golden Italian queens last year that I will try the coming season.

JOHN H. RUPP.

Washington, Kans., Feb. 27.

Thinks that Bees Freeze to Death.

I have kept bees about five years. I use the Langstroth hive, both 8 and 10 frame, but I prefer the 8-frame, because in the winter the bees fill the hives from side to side, thereby stopping any cold current of air from passing up; and as bees hang in a perpendicular mass best, the 8-frame hive suits a perpendicular mass best.

I see that Mr. Abbott says bees don't freeze. Now I had 3 colonies to die in the last blizzard, and one in particular was in good condition at frost—it had plenty of bees and honey, and I said to myself, "Condition extra good." But the day of the blizzard I closed the hive doors all but about an inch, but something pulled the stopping out of that very hive, and the next morning the bees were dead, leaving about 14 pounds of honey. So you see they did not starve, but froze to death. So Mr. Abbott and I don't agree. But he is all right.

J. A. BEARDEN.

Cyruston, Tenn., Feb. 15.

Preventing Propolis on Top-Bars.

In the southwest Texas convention report the question was asked, "What device can be used to keep bees from sticking propolis on the top-bars of brood-frames?" No one was able to answer, and I am not sure that I can, but I offer the following suggestion:

Take a strip of zinc or tin the full length of the top-bar, and ⅛-inch wider than its width, *i. e.*, if ⅞ top-bar the strip should be 1⅛ inches wide, if one inch top-bar, then a 1⅛-inch strip. Turn the sides of the strip down at right angles, thus ⌐¬, so that the space between will fit over the top-bar snug; and fasten it by driving a few small tacks or brads in each side.

I have never seen or used anything like this; the idea struck me while reading the report, and the more I think of it the more I am convinced of its utility and its simplicity, and the small cost would certainly make it desirable. If the idea is original with me, bee-keepers in general, and those of southwest Texas in particular, are welcome to use it without the payment of royalty. All I ask in return is that if any one considers it worth a trial, that he or she will report results through the American Bee Journal.

JNO. W. HOFFMAN.

Evanston, Ill.

Wintering Tolerably Well.

This has been a beautiful day. Bees are coming through tolerably well, though a few colonies I judge have considerable diarrhea. They had a splendid flight yesterday and to-day. We have had about two months of severe weather, the coldest days being Jan. 28, 10 degrees below zero, and Feb. 12 at zero.

JACOB MOORE.

Ionia, Mich., Feb. 26.

Coldest Weather Known in Texas.

There has been some of the coldest weather down here in Texas known since the oldest men can recollect. The snow fell for 24 hours, and covered everything up. We lost 2 colonies of our bees—cold weather and starvation was the cause. We are having nice weather now, though, and are expecting a good honey-year.

SPURLOCK BROS.

Spurger, Tex., Feb. 20.

The Cold Weather in Florida.

Florida has experienced unprecedented cold weather this winter, and it is feared that many orange, lemon and fig trees will not leaf out again. There was a severe storm of snow and sleet Feb. 14, followed by freezing nights. On Feb. 5 I was delighted watching the bees of a strong colony carrying in big loads of lemon-colored pollen, gathered from the ti-ti. Freezing weather soon destroyed the bloom. Many colonies will starve unless fed.

MRS. L. HARRISON.

St. Andrews, Fla., Feb. 19.

Wintered Well—A Report.

Bees in this section of the country have wintered so far well—no signs of diarrhea yet. The extreme cold spell has taken a turn, and the mercury has risen to 4 degrees below the freezing point. The snow is nearly all gone, and I am watching an opportunity to give my bees a cleansing flight. I have 125 colonies in my bee-house, and one outside in a chaff hive. The season of 1894 proved with us here a light one for honey. My surplus amounted to only 3,000 pounds in all. We hope for a good and prosperous season this year.

STEPHEN ROESE.

Maiden Rock, Wis., Feb. 25.

German Bees—An Experimenter.

I should like to hear from some who make a specialty of rearing German queens. I have been experimenting with bees on a small scale for several years, and I have been interested in the races and strains of bees in regard to their merits for comb honey production. I am convinced that I can run an apiary in my locality (Alderson, W. Va.) with profit, and expect to engage, in the future, exclusively in fruit and bee culture, and expect to continue my experiments as to which bee is best adapted to the exclusive production of comb honey, and will give such experience from time to time in the American Bee Journal.

So far my preference is decidedly in favor of the German pure, and next Italian queens mated to pure German drones. I have tried both the so-called golden and 3-banded, and can't tell the difference in honey-gathering qualities. I have never had a queen of either variety whose bees were any more gentle than my German

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Address, H. G. QUIRIN,
12A3t Bellevue, Ohio.

bees. I will not vouch for my neighbor's blacks, as I tried to hive a swarm last summer, and they got too hot, and I gave up the job. With my own bees I scarcely get stung by either blacks or Italians. I handle bees without veil or gloves, and got stung only once last summer, except by a Carniolan colony.

I have tried only one colony of Carniolans, which proved to be the crossest bees I ever met. They used more propolis (propolis and wax mixed) than any bees I ever tried, but their honey rivaled that of the blacks in whiteness, and they seemed to store equally as well; but I can't put up with their sting. However, I shall try others by way of experiment.

Last year white clover failed. It was cold and wet. Basswood failed entirely from some unknown cause; however, I secured 40¼ pounds per colony, spring count, principally from sourwood. In 1893 I secured 77 pounds per colony, spring count, and if I had had the bees in the same condition then as last year, I might easily have secured 100 pounds instead.

I have a nice patch of alfalfa, Alsike and melilot, sown last season, which I am watching with considerable interest. I expect to experiment with other honey-secreting plants, and would like to hear from those who have done so, through the columns of the "Old Reliable." I have never lost a queen in introduction. I use the Miller cage. G. H. ALLEN.

Glen Wilton, Va., Feb. 2.

Scarlet or Crimson Clover.

I sowed one acre about Sept. 15, 1894. I sowed it broadcast in the cornfield, and then I cut a brush and hitched a horse to it, and went once in a row. A prettier stand of clover never was seen. I sowed 10 pounds to the acre. I don't see anything to hinder it from going through the winter, for it looks so nice and green. It was recommended highly to me for bee-pasture. I send the editor a sample of the seed.

Forestville, Ind. J. M. K.

[Thank you, Mr. K., for the sample of seed, which came all right. As I expected Dr. Miller a few days after the seed came, I decided to keep it and hand it to him, which I did. He will plant it, and then likely report on it.—THE EDITOR.]

A Good Lesson Learned.

Last year was a total failure here, as far as honey was concerned. All our bees had to be fed sugar for winter stores, but they are wintering finely, and we hope for a better time the coming season. One lesson I think I learned. Had the bees been fed when the hot, dry wind killed everything on which they could work, so brood-rearing would not have stopped, they would have been in condition to gather the little honey which came in September but only lasted for a few days. Had they been *very strong* they might have gathered enough for themselves, at least, and perhaps a little for me also.

MRS. A. L. HALLENBECK.

Millard, Nebr., Feb. 18.

Success of a Beginner.

I had only one colony of bees, spring count, and increased to six. All seem to be in good condition to go through the winter. I am just making a start with bees, and delight in the work more than anything that I have ever come in contact with. I am now 21 years of age, a farmer's son, and have taught about 25 months in the last four years of my life, in the free schools.

I manufactured my own hives, frames, etc., and delight in doing my own work.

The Italian bees are strange little animals in this section of country. In fact, two years ago they were not heard of here, to my knowledge, and I had not heard of them but a few times (perhaps a half dozen) until I purchased my colony (August, 1893), which cost me $10 delivered at my home. I had never seen a queen until then, nor read or heard of a bee-paper. How foolish and ignorant some people are. But I suppose we all live and learn.

My father has kept from three to five colonies of blacks in the old-fashioned hollowed-out-log hive for several years, and I never gave them the first look or thought, only to "steal" a little of their sweets in the honey-flow. JIM J. WEBB.

Mayking, Ky., Feb. 18.

Bee-Keeping in Alabama.

I sold my bees at Brothertown, Wis., last fall, and came here to try the Sunny South, which, by the way, is covered with about 4 inches of snow this morning. We have had pretty good winter weather since Feb. 6, for this country. I bought 10 colonies of bees in January, in gums (boxes made of pine plank and chincked up with mud); they cost me $13.20 for the lot, delivered. My bee-yard does not look very fine at present, but in time I expect to see what can be done here. Bees were bringing in pollen last month. J. H. HAIGHT.

Fruitdale, Ala., Feb. 15.

Early Brood-Rearing.

To-day (Feb. 11) is the first fair day after the blizzard, so I took a walk through the bee-yard, and I noticed some with their hive-entrance nearly closed up. So I got a bent wire that I keep for cleaning entrances, and while doing this I noticed some young bees, fully developed. In order that the readers of the Bee Journal may know that I am not telling a story, I got two of those that were not much broken to pieces by scraping them out through the entrance, and I have sent them to the editor. This is the first that ever came to my notice at this time of the year. I got them from two different hives. The bees are on the summer stands, and they have had no flight since the third week of December, 1894.

Easton, Pa. JOHN BERKEY.

[It is nothing very unusual for bees to have a little patch of brood in their hives in February, but it is not considered the most desirable thing.—THE EDITOR.]

A Splendid Report.

My daughter and I are novices in bee-keeping. A year ago last April we commenced with two colonies, which were shipped from Colorado, and were very weak when received; however, we increased to five colonies, and secured 225 pounds of comb honey that season. We brought the five colonies through the following winter (1893-94) all right in packed hives. The first swarm came out on May 6, and went off to the timber. However, we increased to 19 colonies, and had 1,118 pounds of comb honey. We had one swarm come out on June 29. We put it into an 8-frame dovetailed hive, and they about filled it the next day. We put on a super the second week after. We had three supers on it, and kept three on all through the season, and we took from it 234 pounds of comb honey, and they had enough left to carry them through the winter.

We have our colonies all packed, and the bees fly nearly every day. T. R. JONES.

Watrous, New Mex., Feb. 5.

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47 Broad St., NEW ORLEANS, LA.

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Honey & Beeswax Market Quotations.

CHICAGO, ILL., Mar. 4.—The demand for both comb and extracted honey the last two weeks equaled any like period during the present season, and our market is comparatively bare. We attribute this to the continued cold weather. We advise any one holding honey to ship now while there is good demand. There is a great deal of inquiry for California extracted — more than usual We quote: White comb, 14@15c.; extracted, 5@7c.
Beeswax, 26@28c. J. A. L.

CHICAGO, ILL., Mar. 7.—During the past two weeks a good movement has been felt in the market. Sales have been in small lots, but quite frequent. We quote: White comb of the highest grade, 14c.; off in color, 13@13½c.; yellow, 10@11c; dark, 7@9c. Extracted, 5½@7c.—the higher price for white in 60-lb. cans.
Beeswax, 28@30c. R. A. B. & Co.

KANSAS CITY, Mo., Mar. 14.—Demand is fair for comb and extracted. We quote: No. 1 white, 1-lbs., 14@15c.; No. 2 white, 12@13c.; No. 1 amber, 11@12c.; No. 2 amber, 10@11c. Extracted, 4½@6½c. Beeswax, 22@25c.
C. C. C. & Co.

CINCINNATI, O., Mar. 11.—Demand is slow for extracted and comb honey, with a fair supply. We quote: Comb honey, 14@16c. for best white. We have no use for dark comb. Extracted, 4@7c.
Beeswax is in good demand at 25@28c. for good to choice yellow. C. F. M. & S.

PHILADELPHIA, PA., Feb. 15.— Comb honey is very plenty and slow of sale at 12@13c. Extracted in fair demand at 5@6½c.
Beeswax scarce at 30@31c. W. A. S.

NEW YORK, N. Y., Feb. 20.—We are gradually working down our stock of comb honey, and the indications are that we will succeed in disposing of all of the white honey and possibly all of the dark during the spring, at following quotations: Fancy white, 1-lbs., 12c.; fair, 10c.; buckwheat, 8@9c. The market is well supplied with extracted honey. Demand is fair for choice grades, while common stock is neglected. We quote: White clover and basswood, 5½@6c.; buckwheat, 5@5½c; Southern, 45@55c. per gallon, according to quality. Beeswax firm and in good demand at 30@31c. H. B. & S.

BUFFALO, N. Y., Mar. 16.—The honey market is getting quite well cleaned up here. We quote: Fancy, 13@14c.; choice, 11@12c.; buckwheat and commoner grades, 7@8c. Extracted is in very light demand here, and we would not advise shipments. B. & Co.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

J. A. LAMON, 43 South Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 28 & 30 West Broadway
CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.

Kansas City, Mo.

C. C. CLEMONS & CO., 423 Walnut St.

Buffalo, N. Y.

BATTERSON & CO., 167 & 169 Scott St.

Hamilton, Ills.

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Convention Notices.

MINNESOTA.—The regular semi-annual meeting of the Southern Minnesota Bee-Keepers' Association will be held on the first Monday in May, 1895, at LaCrescent, Minn. All bee-keepers invited. E. C. CORNWELL, Sec.
Winona, Minn.

UTAH.—The Utah Bee-Keepers' Association will hold their semi-annual meeting on Thursday, April 4, 1895, at 10 a.m., in the Fish Commissioner's rooms in the new city and county building, Salt Lake City.
Provo, Utah. GEO. E. DUDLEY, Sec.

WASHINGTON.—The next meeting of the Western Washington Bee-Keepers' Association will be held on Monday, April 8, 1895. Subjects of interest to bee-keepers will be discussed. Bee-keepers are invited to attend.
Tacoma, Wash. L. D. LITTOOY, Sec.

TEXAS.—The Texas State Bee-Keepers' Association will hold its 17th annual convention at the apiary of W. R. Graham, in Greenville, Tex., on Wednesday and Thursday, April 3 and 4, 1895. All interested are invited to attend. "NO HOTEL BILLS."
Ft. Worth, Tex. DR. WM. R. HOWARD, Sec.

Binders for this size of the American Bee Journal we can furnish for 75 cents each, postpaid; or we will club it with the Bee Journal for a year—both for $1.60. We have a few of the old size (6x9) Binders left, that we will mail for only 40 cents each, to close them out.

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Question-Box.

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Can Bees Hear?—If So, How Do You Know?

Query 963.—How do you know that bees can hear?—School-Girl.

H. D. Cutting—I don't know.

G. M. Doolittle—I do not believe they do.

W. G. Larrabee—I don't know that they can.

B. Taylor—I deny it. I never said I "knowed."

Prof. A. J. Cook—I don't think they can. See my "Bee-Keepers' Guide."

Mrs. Jennie Atchley—I don't know. How do you know that they can't hear?

Chas. Dadant & Son—If you place a bee-hive in a very dark room and scatter the bees, their hum will draw them together.

Eugene Secor—Bees have no ears, and I do not know whether they hear or *feel* sound, but that they do somehow recognize certain sounds I am convinced.

J. A. Green—I don't. I do not think they hear just as we do, though they undoubtedly recognize some sounds that we hear, and probably some that we do not.

J. E. Pond—I don't know. Does any one? That they are susceptible to jars I have often found. I presume they can hear, as I believe the all-wise Creator designed they should.

Mrs. L. Harrison—At one time I had a very cross colony of bees. I used to amuse myself by stepping out on the porch, and as soon as I made the least noise they were there.

Dr. J. P. H. Brown—By their actions when any forcible object is applied to any part of their hive. The "how" part of this question has led to much discussion among naturalists.

E. France—I believe that bees hear, but whether they have ears or not I don't know. I know by the actions of the bees that they recognize sounds, but how they get the impression I don't know.

C. H. Dibbern—Well, now, dear "School-girl," I do not know "for sure" that bees can hear at all, as they do not appear to have any ears. I think, however, that they are able to distinguish sound in some way.

Rev. M. Mahin—Of an evening when millers were troublesome I have seen one alight down on the alighting-board, and the nearest bee would utter a sharp cry, and every one of the guards would instantly rush in that direction.

Mrs. J. N. Heater—I do not *know* that they do hear, but what most of all makes me *believe* they do hear, is the different sounds they produce under different circumstances. A person much with them soon learns their language.

P. H. Elwood—The teachers taught us so! I know of no reason why bees should have a vartety of voice, unless they can distinguish them by their organs of hearing. They have a hum of contentment, a cry of pain, a voice of rage, etc.

Dr. C. C. Miller—One day a swarm commenced to return to its old hive. To stop it I moved it to a new place. The bees came there. Then I put it on a wheelbarrow and journeyed around the apiary with it. Whenever I stopped the bees came. The hive looked like other hives, so I think it was the sound that attracted the bees.

Jas. A. Stone—I could not give better proof than that when swarming, if the queen is retained at the hive they sometimes return before they alight. And they have no way of knowing as soon of her absence except by sound. Also, you may mash the heads of as many drones as you please, without danger, but when you get your stick on the head of a worker, you can hear a different hum, then look out for stings!

G. W. Demaree—How do I know? If I was near you, and you did not know it, and I should speak to you, and you should "start" or "jump," wouldn't I know you heard? If you were driving a horse, and some one was to shoot off a gun, and your horse should "jump," wouldn't you know he heard? In the same way we know bees hear. Take a basket of bees to a prepared hive, and start a quart of them into the hive; *hear the "hum,"* then look in the basket. See?

R. L. Taylor—Because they notice sharp noises, as the beating of tin vessel; because the call of the first bees of a swarm that find the entrance of the hive provided for them is immediately responded to by the others, even those at a considerable distance; because the cry of pain or fright of bees accidentally caught in handling the combs often instantaneously arouses the bees at some distance away; and because queens respond to the piping challenge of their sisters.

Rev. Emerson T. Abbott—Because when the other girls talk to her in school she answers. If you do not believe it, take out the queen for a short time until the bees miss her, and then set her on top of one of the frames and listen for the note of warning that will sound through the hive at once. The ability to make a voluntary sound implies an ability to receive the vibration of the atmosphere, which that sound is, when said vibrations are caused by an insect of the same family. Noise means ears, and ears mean noise.

Wm. M. Barnum—Well—I don't know. The fact is, I don't know any more about this peculiar anatomical problem than does our little "School-Girl." Bees seem to convey ideas to one another by touching mandibles; this is against the "hearing" proposition; but, we are all aware of the shrill piping of the queen, and the attendant agitation of the bees. Now, little "School-Girl," doesn't it say somewhere in zoology, that things that *make* sounds can *hear* the same? If this is true, probably the bees hear? But *how?* I believe Prof. Cook says they have no visible ear-organs.

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Doctor's Hints

By DR. PEIRO, Chicago, Ill.

Lenten Don'ts.

DON'T regard civility as too precious to be aired in public. The man to whom you are rude to-day may remember it sometime when you least think or desire that he should.

DON'T feel convinced that the horse-race is more to be considered than the human race. Many people have lost money and caste through such imaginings.

DON'T order the hotel waiter as you wouldn't a yellow dog, under the impression that to do so makes you appear accustomed to servants. They who are, exercise gentleness.

DON'T blame your employer for expecting $100 talent from his $20 help. He is built that way, and his hired man don't often try to undeceive him.

DON'T tell the caller that the lady of the house "is out" when her voice can be heard to ooze from the next room. Your reputation suffers thereby.

DON'T neglect paying your friend that borrowed dollar. He may object to his money keeping Lent.

DON'T believe that the use of a toothpick at the table is an evidence of exalted refinement. As a rule, the spattering of particles of your dinner upon the guests is not unanimously desired.

DON'T overlook the fact that the too frequent lubrication of your tonsils with "sour mash" leads you a sure race to physical and financial ruin.

DON'T attempt a distinction between publicly paring your nails and your corns. The difference isn't great enough to insure respect for you among polite people.

DON'T attempt the disguise of a gentleman. The deception is easily noted the moment you address your wife or mother. But if you study the part honestly, and act it with generous purpose, you will need no disguise; people will see that you are a real gentleman, and cannot hide it.

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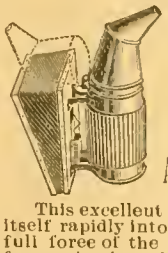

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THE OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS

35th Year. CHICAGO, ILL., MARCH 28, 1895. No. 13.

Contributed Articles.

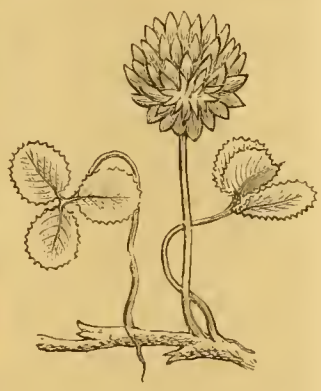
On Important Apiarian Subjects.

Importance of Sowing for Honey.

BY W. J. CULLINAN.

The time has come when people who pay no attention to bee-pasturage, can no longer expect to reap a rich harvest from their bees. Land is now so valuable in this section that every available acre is put under cultivation, except occasionally a small plat that has been reserved for pasture, with here and there a few acres of meadow. But the pastures are grazed so closely as to afford even the persistent and low-growing white clover but little chance to bloom; while the meadows abound in tame grasses—mostly timothy—and none of which are of much use to the bees.

Alsike Clover.



White Clover.

I have seen the time when white clover abounded on every hand, growing thickly along the roadsides and covering almost every foot of waste land; and I secured from that source alone, in 1889, about 3,800 pounds of choice honey from 100 colonies of bees, spring count. But several dry seasons in succession have almost exterminated it, so that now we find only diminutive patches here and there. As a consequence, our honey-crops have been very "diminutive" for several years. Well, the remedy for this—and the only remedy—is to *sow seed.*

If you have only 50 colonies of bees, and you have the money, it will pay you to buy white clover seed and sow it along every roadside, on every common, and in every pasture where the owner will give you permission to sow it, within two miles of your apiary. And around gullies, on gravelly banks and in fence corners and on low bottom lands not cultivated, sow sweet clover, which is one of the best honey-plants grown in this country.

If you own land, sow a portion of it in Alsike clover, and if you can get your neighboring land-owners to sow some also, do so, by all means. Furnish them the seed at half price, if necessary; and it might pay to *give* away a limited amount in order to increase the acreage in your immediate locality.

I prefer the month of March for sowing clover seed of any kind, but the forepart of April will do; and by the way, the best stand of red clover I ever obtained in my life was sown about the first week in April on wheat land. Some advise sowing it with rye, but I never could see much difference, only in the above exceptional case, which was in favor of the wheat.

But I would advise all bee-keepers to sow Alsike instead of red clover: it is equal to or better for pasture, makes finer and better hay; and if you allow it to mature seed, it will no doubt yield a better return, while if atmospheric conditions are at all favorable it will also afford a rich harvest of excellent honey. Don't fail to sow a patch this spring, as an experment, if you have never tried it. Quincy, Ill.

Bee-Management in East Tennessee.

BY ADRIAN GETAZ.

In a preceding article, I stated that I would give an outline of *my* management of bees.

Concerning wintering, we have some serious difficulties to

Branch and Blossoms of the Sourwood of the South.

contend with. Between Oct. 10 and March 15, that is, five months, nothing can be gathered. If the weather would only stay cold enough to put the bees to sleep, and keep them snugly sleeping all that time, it would be well, but such is not the case. Instead of that, we have a perpetual succession of a few warm days followed by rain or snow, then a few cold, sometimes very cold days, then warm again, and so on through the whole winter. During the warm spells, the bees will fly out in search of honey or water, but a good many are chilled and never come back, more or less brood will be started, honey will be consumed, and the bees, that is, those which do not perish outside, will more or less wear themselves out, and all to no purpose. The next cold wave will chill some of the bees not clustered close enough, and invariably a part of the brood, as it cannot be all covered when the cluster contracts closely on account of the cold. The process is repeated from time to time through the whole winter, and when the spring comes we find ourselves with colonies having consumed nearly all their provisions, occasionally some starved, and the number of bees considerably reduced, and what bees are left nearly worn out by their useless attempts at rearing brood out of season. For the edification of those who may doubt the above statement, I will refer to a short communication from a Tennessean, inserted in the "A B C of Bee-Culture," under the article on spring dwindling.

Well, what can be done? Only one thing. Use chaff hives or some equivalent. With a chaff hive, it takes some time for the heat of the sun to reach the bees inside so as to make them fly; and in the afternoon of warm days, thousands of bees will come out of single-walled hives exposed to the sun, only to be chilled by the cold air outside, or even die on the snow; while those in chaff hives will stay at home until the weather is warm enough to fly safely.

As to the brood reared I think fully as much, and perhaps more, will be reared in the chaff hives, but on account of the protection afforded by the chaff, only very little or none at all will be chilled. This is not theory, it is the result of several years of experience.

A peculiarity of East Tennessee is that, owing to our elevation above the level of the sea the nights are always cool except during the hottest months of the year—from about the middle of June to the middle of August. This makes it necessary to protect the surplus receptacle as well as the brood-nest, at least during the fore-part of the honey season. Few people are aware of the fact that most of the comb-building and the putting of honey in the sections is done during the night, and if the supers are too cold, the honey will be left in the brood-nest, the queen's laying crowded out, swarming developed, etc. During the activity of the day, the honey coming from the field will be stored in the nearest empty cells, at least most of it. During the night it will be handled (if that expression can be used), evaporated by the bees, and carried up-stairs. If the supers are too cold, such work is stopped and the honey left in the brood-nest.

As to the best construction of hives to obtain a sufficient protection, and yet admit easy handling of supers, I have little to say. Some time in the future, I may take up the subject again. Whatever means will be adopted to secure such protection, will also have the advantage of protecting the bees against the excessive heat of the day, and, so to speak, store that heat for the night use, and hereby increase the surplus by equalizing the temperature through both the day and the night.

A third consideration is the size of the hives, or rather the brood-nest. Before going any further, I would ask the reader to look carefully over my article on the honey-resources of East Tennessee. (See the Bee Journal for Dec. 6, 1894.) As it will be seen, our honey season (leaving the fall flow out of consideration) lasts from March 15, or about, to the middle of July—a period of four months. During that time, the honey comes in from different sources, but not regularly, and never in very great quantities. It is also impossible to tell in advance which sources will be good and which will fail. The sourwood is the surest of all. Under which circumstances there is but one way of managing, that is, *keep the colonies strong all the time*, so that whenever honey can be gathered, there should be a sufficient force of bees to make the most of it. Where the honey comes in in great quantities and at some definite time of the year, some other plan may be better, but I say again, where surplus honey has to be gathered little by little, and in a very irregular way, at that, during a period of four months, there can be but one successful kind of management—*keep your colonies strong all the time!* This has been my experience.

Strong colonies mean large brood-nests. A strong colony can, by feeding, spreading the brood, constant watching and manipulating, be built in a small-sized brood-nest, but cannot be maintained. Mr. Doolittle, our most successful small brood-nest manipulator, says himself that a colony thus treated attains a maximum of strength and then decreases, and that the management must be such that (in his locality) the maximum should be attained at the opening of the basswood honey-flow. But even then, such results cannot be obtained without constant watching and manipulating, and involves a considerable work. And where one Doolittle or one Miller succeeds, 999 bee-keepers would either fail, or ruin their colonies completely.

I have had large brood-nests only during the last three years. So far I have not reached very conclusive results. I have always drawn on the large hives to make up whatever losses occurred, or built up weak colonies. Bad seasons and bee-paralysis have interfered, more or less. As far as I can see, the strength of the colony is at least in proportion to the size of the brood-nest, and the amount of surplus obtained at least, and probably more, than in proportion to the size of the brood-nest. I mean by that, that eight hives of thirteen frames each will probably give more surplus, and certainly as much, as thirteen hives of eight frames each. There might be an exception the first year, as of two equal swarms put into different sizes of brood-nests, the one in the large brood-nest will need more time to build up to full strength, but the following spring the superior strength will begin to tell on the result. But should the result be equally good, there would be yet several advantages in favor of the large brood-nest. The first would be less swarming, and, as I said before, a colony that refrains from swarming will give more surplus in this locality than one that did swarm and with its swarm combined. Remember, here, that I am writing exclusively from a comb-honey producer's stand-point.

The second is, that a strong colony in a large brood-nest hive will take care of itself the year around, never needs any feeding (providing, however, that no honey should ever be taken out of the brood-nest) and will invariably winter well; even if queenless in the fall enough bees will be left in the spring, to start again, with the help of a queen or some brood to rear one. Other minor advantages are freedom from robbing, quickness in taking possession of the surplus boxes, ability to protect their brood against the cold during the winter and spring, much larger swarms, and what seems strange at first, early swarming, if there is any swarming at all. But, after all, it is easy to see that a strong colony will be crowded before a weak one, not only on account of its original strength, but also on account of its ability to rear brood earlier and in much larger quantity.

The last condition is prevention of swarming, if possible (I am referring to the comb-honey producing kind of bee-keeping). There is but one way—removing the queens at the opening of the swarming season. The drawback in this locality is a certain loss of brood that would just then produce workers ready to take advantage of our best honey-flow (the sourwood). This last ought to be minimized. In 1893, I announced my intention to experiment largely in that line, but 1894 was so bad for the bee-keepers and the bees that I did too little to report, and had to postpone full experiments until this year. I want here to blame severely all our text-books for not even mentioning this subject, or if they do (only 2 or 3 I think have done it), they dismiss it with only a few words of blame.

In reading my article on "East Tennessee Honey-Resources," I see it is liable to be misconstrued, as implying the idea that East Tennesseans are a bad set of people. This, I am happy to say, is not so. There are good and bad people here, as anywhere else, but taken as a whole, certainly as good as can be found anywhere else on the earth. I have been treated here as kindly and as well in every respect as anywhere else I have been, and as well as if I had been a native-born; and I feel as much at home here, perhaps even more, than I would in the country where I was born.

Knoxville, Tenn.

Management to Prevent Spring Dwindling.

BY MRS. A. L. HALLENBECK.

With the first warm days of spring, which usually come in March and April, the active work of the season for the bee-keeper begins. Colonies should be carefully examined that none are short of stores, hives carefully protected that brood-rearing once commenced shall have no check. We are still likely to have cold weather, and if not well protected colonies will suffer great loss, not only of bees, but of brood also, which will become chilled and die, and our bees will suffer a little later, or with spring dwindling, which thins the

working force of many an apiary till little honey is secured.

On the strength of the colony early in the spring depends the honey crop. One bee lost now, means just so much less honey. If colonies are weak, many double them up till a good strong colony is formed, saving the best queen and destroying the rest. More brood will be reared in one good strong colony than in several weak ones, for the larger the colony the more brood-combs can be covered, and the less the danger of brood or bees becoming chilled. Then, too, the bees from a strong, thrifty colony, when they leave the hive for the necessary supplies of the family, go out with a vim and rush that can be easily distinguished from the timid, half-hearted manner in which their sisters in the weak colony go forth. Should the weather be a little chilly, they will not come out and go shivering back several times before venturing to make the journey, nor are they as apt to become chilled and drop down before they reach the hive in the return flight. This is the way so many bees are lost; and the colony dwindles away, as not enough bees are left to cover the brood, and young bees do not hatch as fast as the old ones die.

By having all colonies strong, there is less danger; but our care should not stop here. Bees need pollen and water to rear brood, in addition to the honey which they have in the hives. We can in a great measure supply this near to their homes so that when for a short time the sun comes out and they can fly, they need not go long distances for what they need, and run the risk of never being able to return. Corn-meal and rye or wheat flour placed in a shallow pan or dish where the sun shines warm in some sheltered place, will furnish them with pollen. Here they will work with a will that will well repay for the trouble of furnishing it for them. When the weather is warmer and natural pollen plentiful they will pay little attention to the artificial substitute. To attract their attention and help them find the dishes of flour or meal, put a little piece of honey in the dish till they find it.

Now all their wants are supplied except water. This they may be obliged to go a long ways to find, and then carry it, ice cold, perhaps, back to the hive. Is it any wonder that the poor little water-carrier becomes chilled and drops down before it reaches home? Any ingenious person can devise a dozen different ways in which water may be provided only a few feet from the door of the hive. Anything that will hold water will answer to water them, provided it has plenty of floats so they can drink without getting wet themselves. Place the drinking-vessels in a warm, sunny spot where the water will get all the heat possible, and if you doubt whether the bees like it or not watch them awhile as they carry it home to the hive.

These are the methods f use to prevent spring dwindling, and adding sugar syrup to feed when it is necessary, I am not at all worried about losing any colony that survives the winter; and should there be any honey to gather, they will be ready to carry it in when it comes. Millard, Nebr.

Profit in Growing Alsike Clover, Etc.

BY FRANK COVERDALE.

The growing of Alsike clover for seed, hay and pasture, pays me better than any other crop on my farm. Last year, from 25 acres, I hulled 75 bushels, which was worth at least $7.50 per bushel, and enough good hay after the seed was taken out to feed my 72 head of two-year-old steers until February, 1895, at least, and this feed is excelled by none. When it is thrown into the manger a gluttonous rush is made for it. The seed—75 bushels—at $7.50, or $6.50 clear, per bushel, is $487; 25 tons of good hay, $6 per ton, $150, or a total of $637 as net proceeds, not counting the labor of sowing and harvesting. Twenty-five acres of corn, yielding 40 bushels per acre, at 45 cents, is worth just $450, and the stalks for the cattle to pick are not worth as much for fall feed as the after-growth of the Alsike. The corn crop robs the soil, and the Alsike builds it up, and it is ready when plowed again for 50 or 60 bushels of corn per acre.

Now, Mr. Editor, these are cold facts, and well worth any Iowa farmer's attention. The growing of Alsike clover is a sure success, that is, if a good stand is secured, and I know from eight years' experience that it is much easier to get a stand of it than of the common red clover. In the previous two very dry seasons I was able to get a moderate stand, and last year a good stand, while farmers on each side of me had none worth saving, but plowed up their ground to try it over.

I find that Alsike thrives best on level land where the soil is rather loose and deep, but mine is mostly grown on rolling ground. It grows well along slough edges, where red clover would not grow at all, and thrives best. I would not think of sowing timothy, red clover, nor orchard-grass without adding 2 to 4 pounds of Alsike seed per acre. I was talking to a friend the other day, and he said that when he throws his hay down from the mow, where timothy and Alsike are mixed, he saves enough seed, both Alsike and timothy, fans it clean, for all his next year's seeding, and I am now doing the same thing myself.

SPREADING THE BROOD.

On page 45, Dr. Miller says he certainly wouldn't do it if the queen kept as many cells filled as the bees could fully cover. Now, Doctor, why not reverse the above, and say when the queen fills as much comb with eggs as the bees can fully cover, then I would spread the brood? or, in more proper words, change the outside combs for the center ones—not a spread at all, but a changing of inside sealed brood for outside uncapped larvæ and eggs. That would be thus placed in position to grow and hatch, when, if left outside, it would suffer a low temperature and be chilled, while the capped brood outside is a warm wall of itself, and the thinner covering of bees will save it, while the combs of eggs and unsealed larvæ will soon develop into capped brood, and be just what you want for a later spreading. This is, in my judgment, the secret of spreading brood, or, in other words, changing newly-laid eggs and unsealed larvæ for capped larvæ that will stand the next cool wave, and form walls to save that which will not live through unless under the careful hand of man.

Delmar, Iowa.

Something About Swarming and Hiving of Bees

BY A. C. SANFORD.

The bees swarm because their natural instinct is to multiply themselves, and because their home becomes too small and warm. The bees in small hives will swarm earlier and more in number if left to themselves, other things being equal. Now, if we wish to control the swarming tendency, and we must if we expect to get a good crop of honey, I have found by long experience that good-sized hives are better than small ones. I think it is better to give them room to occupy just as soon as the strength of the colony will permit—don't wait until your hive is chock-full of bees. By giving room in advance they will not be apt to swarm so early, and when a swarm comes off it will be very large. Such swarms are A No. 1 for making comb for extracted honey.

A record should be kept of the date of the swarming, because in seven or eight days we must go through the parent hive and dispose of all the surplus queen-cells, as only one queen is necessary for each colony. At such times the opportunity is good to supersede poor stock with good. If the surplus queen-cells are not cut out, there will nearly always be several after-swarms, or casts, which are very annoying, as such are often hard to manage, and unprofitable, unless we want increase. By managing thus, you have only doubled your stock, and your bees should be in prime order to get honey.

I will give a few thoughts about swarming and hiving the bees. The old way used to be, when the bees swarmed, the women-folks and all hands were out with the bells and the tin pans, and there was din and clatter until the bees settled, which was not nearly as soon as they would have if they had been alone. It is nice to have some small, smooth trees near by, but should not be allowed to get over about 12 feet high—smaller are better—for the bees to cluster on. No large trees should be near the apiary, as they are apt to make trouble. If you have no trees, just go to the woods and cut some, and put in front of the apiary about two rods. Put down as you would a hop-pole. The bees will cluster on them, and you can pull and carry the swarm where you choose.

Now, I will give you my plan. When you first see a swarm coming out, go quietly to the hive, stand beside it, and see if the queen is able to fly with the swarm—if not, you will find her on the ground, if you are on hand. If she is not able to fly, place her in a cage quickly, and put her with the swarm, or else remove the old hive out of the way, and place a new empty one on the old stand. Place the queen in it, and the swarm will hive themselves, although care should be taken and not let them go into other hives, as they sometimes will.

Now when the queen flies with the swarm: If you wish them to alight quickly, don't get in their way, nor interrupt them, unless they should move in a direction where there are no trees. In that case, sprinkle with water, or scatter dust among them. The first or prime swarm will rarely ever try to run away if properly treated.

I use a light box on a pole about 10 feet long. The box is like an old-fashioned box-hive, with one end open, and lots

of holes bored in it for a swarm-catcher. When about two quarts of the bees have clustered, put the box up and shake them in, and turn the open end out so the others can fly in, and if you don't do this too soon, they will all go right in, or on the box. You can just lean the box up against the tree if the pole is the right length, and prepare the hive, if not ready.

Right here let me say the hive must be large enough so the bees will have reasonable room, and the entrance large enough, and the hive must be well shaded or they will not stay.

When the bees are all settled in the box, you can carry them where you wish. To hive them, take the top of the hive off, and the queen-excluder, and put a quart or two in to start them; put the excluder and covers on carefully, and shake some in front of the entrance. They will soon go in. You can hurry them up by brushing them carefully. When you pour some of the bees out, hold the box out of the way, or it will draw them to it. Gently tapping on the hive will help to get them in. You can put sections on immediately, or extracting super over a queen-excluding honey-board.

Should the bees be very cross while swarming, the smoker is the best remedy. If you shake them off the tree, and they fall some distance, they will be angry. I have kept bees on the above plan for 17 years, and have found it reliable. I seldom, if ever, have any "runaways." Ono, Wis.

Comb Honey—Wintering, Etc.

BY EDWIN BEVINS.

I am glad that the American Bee Journal has been giving its readers a series of articles on the production of comb honey, from the pen of Mr. Abbott. In addition to what I have gleaned from the text-books, I have gotten some valuable information on that subject from the writings of Hutchinson, Hilton, and that man of sturdy common sense who stands guard so near the northern frontier of beedom—B. Taylor.

Mr. Abbott does not live very far away, and I am looking for something from him that will have a special value for the bee-keepers of northern Missouri and southern Iowa, besides what he may write that will be of value to bee-keepers everywhere. My five years' observation of this field leads me to believe that it has some advantages for the production of white honey, and I hope that Mr. Abbott will, before he closes, give his impressions of it.

BLACKS VS. ITALIAN BEES.

In Mr. Abbott's first article I notice that he puts in a claim for the blacks, that they cap their honey much whiter than the Italians. I have a decided partiality for anything having a German origin over anything having its origin south of the Alps, but truth compels me to say that in this matter of whitening of comb the superiority of the blacks over the Italians begins and ends. When there is an abundant and continuous flow of nectar the blacks will do some fine work at comb-building, but let the flow be scant, or intermittent, and they will do the most inartistic job of patch-work of any bees in existence, with the exception, perhaps, of the bumble-bee!

WINTERING BEES.

A good many bees will probably die this winter, through this section of country. Many are kept in log and box hives, and their owners never think of feeding under any circumstances. All bees in this section came to the winter deficient in stores. A neighbor told me that he looked late in the fall into the hives of a man who uses the Langstroth hive, and that there was no honey to be seen along the top-bars of the frames. The man told him that he should not feed. His bees, of course, will die. When one gets a realization of the possibilities there are in bees it does not seem that he would let them die of hunger when sugar is so cheap. I know that they call for some labor and some outlay of money in seasons when there is no return, but I am equally confident that the man who has the bees at the right time will be more than repaid.

It is with much trepidation that I venture to write anything on the old, old subject of wintering bees. What I have to say may amuse the veterans, and perhaps not be helpful or instructive to anybody, but, nevertheless, the method I am about to describe proved a success with me last season, and at this writing (Feb. 4) my bees are all in perfect condition. I have always had a strong dislike for cellar-wintering, and so concluded that I would try to find a way to winter without moving the bees at all.

For the Dadant hives, which are double-boarded on the north and west, I just put a straw mat or piece of burlap on top of the frames and a chaff cushion on top of that, and then pack straw a foot or so thick on all sides of the hive except the front, tramping it as solidly as possible and holding it in place in any way most convenient.

For making chaff cushions, I find a sack, such as grocers use to handle a hundred pounds of granulated sugar in, the most convenient of anything. The requisite amount of chaff can be put in and the open end folded so that no sewing at all is necessary.

For the single-walled hive, 8-frame size, I make a box or outer-case of any old boards that are not worth much for anything else, two feet wide, 2½ to 3 feet long, and as high as the hive with section case and cover on. As soon as cold weather sets in I put on the secton-case, place a piece of burlap that will just fit inside of the case over the frames, and then fill, or nearly fill, the case with a chaff cushion. Then as fast as the work can be done I saw a piece 14 inches wide out of the middle of the front of each box or outer case, set the box where the hive stood, and then place the hive in the box so that the front end of the hive shall be just even with the front end of the box. This leaves the whole hive-front exposed to the sun. The box is then filled with chaff, or a mixture of chaff and short, broken straw, tightly pressed in, and a loose cover of boards over all. Last spring my bees were not removed from this protection till settled warm weather in spring, and they all built up rapidly and became strong early, although the spring was an unfavorable one.

This arrangement makes it very convenient to feed bees that are short of stores in cold weather, as the cover can be taken off, the cushion and burlap raised and a cake of candy placed on the frames at any time in a very few minutes. I have fed some during this cold spell and found them dry and lively. There was some frost on the under side of the hive-cover and upper side of the cushion. The measure of protection given may not be sufficient for higher latitudes, but here, where bees usually fly as often as once a month, I think it will be a success.

I would like to know what Dr. Miller would think of such wintering at Marengo. I lived for more than 20 years about 100 miles west of the Doctor in Carroll County, Ills., and don't think I would try it there. I kept no bees then, but it was there that I purchased the right to make and use the Langstroth hive, though I never made nor used any till long after the patent had expired.

DOOLITTLE'S "QUEEN-REARING."

I am pleased with the book "Scientific Queen-Rearing," lately received and read. I had supposed it a book for queen-rearers only, but I believe now that every bee-keeper ought to have a copy, whether he rears queens or not. There is enough incidental information about bees to be worth the price of the book, and, besides, it is worth its price again for the acquaintance it gives with the man who wrote it. Leon, Iowa.

Another Plan of Uniting Nuclei.

BY WM. STOLLEY.

On page 116, is a plan for uniting nuclei, given by Philo S. Dilworth. Now I have a much better way to unite nuclei, as well as all sorts of colonies. I have tried it time and again, and always with perfect success, and desire to give other bee-keepers the benefit of it, and thus save trouble.

If I wish to unite nuclei, I first kill all queens except the one I wish to retain. Next I put a few slices of onion in each hive containing the bees to be united with the colony or nucleus, including the latter. In 24 hours later, I simply remove all queenless bees into the hive containing the selected queen, placing the queen and her original nucleus in the centre, while those to be united with this nucleus are to be placed on each side of the nucleus with the queen, until the hive is full. If any more combs covered with bees are left—simply shake them off in front of the hive, and let them run in. A puff or two of smoke out of the smoker, will finish the job, and no bees will be killed—no fighting will follow.

But it is likely that a number of field bees will return to the old stand. To catch them, I also put a few slices of onions into the nearest hive to their original stand, and if near by, those bees, trying to return, will unite with the bees in that hive. This is a practicable and sure way to unite bees, and never failed with me.

From Jan. 23, until Feb. 10, we had zero weather every day. Then it moderated, and from Feb. 17, until to-day (Feb. 25) bees flew on 7 days, and yesterday the thermometer registered 66° Fahr. in the shade. I always winter my bees on their summer stands in my bee-house, and never lost a colony wintering in 14 years. I have double-walled hives, with square deep frames 11½x11½ inches.

Upon investigation, I found one of the strongest colonies queenless, and another one with an unfertilized queen which I killed. Both colonies had superseded their old queens of 1890–91 late in October, 1894.

I also found two colonies rather weak in bees, but with young and choice queens. In this instance I accomplished the uniting of the queenless bees with the nuclei containing young and choice queens in the following way:

After putting in slices of onions, as stated before, I exchanged stands, thus letting the larger bulk of the bees fly back to their old stand, finding, of course, now a young queen on hand. Those bees remaining on the combs in the queenless hives, I placed, at sundown, beside the nucleus containing the queen. It has worked like a charm again and no bees killed.

In concluding I will say that we have had, and have, rather hard times in Nebraska, on account of the fearful drouth, and if it had uot been for my alfalfa fields, and sweet clover, it would have been a great deal worse for my bees, than it was. All my bees are now in first-class condition, and I mean to keep them that way, if it can be done. A beekeeper worthy the name must know the condition of his bees and the age of his queens at all times, and apply remedies promptly and judiciously. Grand Island, Neb.

"Minnesota Langstroth" Hive and Its Use.

BY C. THEILMANN.

Much has been said and written about bee-hives, and there seems to be many more different hives in use that have not yet come before the public, and which have been operated with remarkable success for many years. I wish to give a brief description of the hive I use, and the adoption and success I have had with it so far.

I kept my first colony of bees in a gum, or a part of a tree; my second colony in a store-box, and my third in a nail-keg. The first one I found in my woods in a tree, the other two were swarms which I found on some wild plum-trees. Two of these colonies swarmed the same season, for which I made boxes, and hived them. This made me five colonies the first year of my bee-keeping, without any outlay for bees, and but little expense otherwise. I got some surplus honey from them, but I don't recollect just how much, but their hives were full of nice honey. I had never kept bees before, and did not know anything about bee-keeping, but I learned enough during that season to know that gums, nail-kegs, store and other boxes were not the things to keep bees in for profit.

At that time I did not know of any bee-paper or bee-books, so I went around the country to see a few scattered bee-keepers, to learn how they kept their bees. After a number of investigations I saw a hive, which, to my judgment, was best adapted for this latitude and climate. I ordered 24 of them, and filled them with bees the next season; this includes the swarms with the first five colonies, which I also transferred into the new hives. This was in the summer of 1870. In 1871 I tried the regular Langstroth 10-frame hive, also some other patents as experiments, but none of them suited me as well as the first ones, and ever since then I have adopted and used this hive exclusively, and will use it hereafter until I can be convinced of a better hive for Minnesota. I am free to say that my success in bee-keeping is partly due to this hive.

The hive is called the "Minnesota Langstroth." It has a portico, and a cap over the supers or section-cases. The bottom-board is nailed tight to the brood-chambers, so it can be used as a feeder, when needed, by tilting up the front end 3 or 4 inches. This is the only perfect feeder I have ever tried; it is always quickly emptied by the bees, and one man can feed a ton of honey or syrup in less than an hour's time in this way. It is always there when needed; it takes no time to put it on the hive, and none to take it off and store it away; neither does it occupy any extra storage room. In short, I find it the best feeder of any I have ever tried or seen, which means a large number of different kinds.

The hive is 17⅛x13¾, and 11 inches deep. The frames rest on rabbets. They are 15⅝x9⅝ inches, inside measure. The top-bar is 18 inches long, ⅛ inch thick, and ⅞ inch wide, with a tongue in the lower side to fasten foundation on it. The bottom-bar is 17⅛ long, stands edgewise in the end-bar, and projects a bee-space outside of the end-bars. This projection is a most excellent contrivance in handling frames quickly. It prevents the crushing of bees in taking out and putting back frames; neither can the bees stick the frames fast to the wall of the hive with propolis.

There is a bee-space all around the hive, also over the frames and on the bottom—nearly ⅛ inch between the frames and the bottom. This gives room to scrape out the dead bees in winter, and also gives good ventilation for the bees.

I used 9 frames the first season, and 8 frames after that. The capacity of the brood-chamber is about the same as a Langstroth 10-frame hive.

My section-case holds 28 seven-to-the foot sections, has three partitions with tin strips on the lower side to hold the sections. It has 2-inch wide strips of glass in the middle of the sides (to see the condition of the sections without disturbing the bees), with wooden slides over the glass to shut out the light.

I have no use for separators—they are a hindrance to the bees. I get straight combs by using nearly full sheets of foundation, by setting the hives level from side to side, and by keeping them full of bees.

I do not paint my hives, because paint will hold the vapor of the bees in the hive, while nearly all, if not quite all, will escape through the pores of the wood, if not painted. This is a big consideration for the health and welfare of the bees, especially in winter.

The lumber for my hives is planed on one side only (the inside) the outside is left rough, which prevents reflection of the hot sun in summer. It also prevents cracking and warping the wood, and is more durable. From the experiments I had with painted hives, I would not use them if I were to get all my hives gratis, and a dollar per hive in cash besides. I don't keep bees for looks, but for the pay there is in it. A more shallow or painted hive may, for one season, give as much surplus honey, but for a long run of successful bee-keeping, my hive has stood the test over all others in Minnesota, when properly conducted.

I omitted to say that I do not use any cushions, packing, or other materials, over the brood-chamber, except a planed ¾-inch-thick honey-board, cleated on the ends to keep it from warping. This board is kept within a bee-space over the brood-frames all the year around, except in the honey season when the section-case takes its place, and the honey-board is then used as a cover over the case, and the hive cap is high enough to cover two section-cases. This cap make also a nice tool-bench when taken off the hive and opened for manipulation, as it has a flat top.

In my 25 years' experience, my unpainted hives, as described above, last just as long, if not longer, then those that I had painted and planed outside. I found no saving in that respect. Theilmanton, Minn.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Bees Fluttering on the Ground.

What causes bees to run out of their hive and run around on the ground, and keep their wings going as if they wanted to fly? They are nearly twice their natural size, and the other bees seem to not notice them, as they do in bee-paralysis. J. W. S.

ANSWER.—When a hen has her head cut off, she flutters around on the ground at a great rate. I don't know exactly what she does it for, and I doubt if she does. When a bee comes out of the hive all swelled up to die, it flutters around a little like a hen with its head cut off, only it seems more orderly about it. I don't know just why it does so, and I doubt if the bee does.

Making Bees Pay—How Many Colonies from Each?

1. In which is there the most pay or money—in rearing queens for sale, selling full colonies, nuclei, or honey?

I live where bees might be made profitable, but we have bad shipping facilities. It is about 30 miles to the nearest railroad, but wagons travel almost daily. Our principal timber is oak, poplar, beech, linden, sourwood, dogwood, maple, and a great many others. We have many plants that afford honey—fruit-trees, etc. I have some artificial pasture in the summer, such as clover and buckwheat. I shall sow a good crop of the latter, as nearly all of my bees got in good order last fall from it. I have about 15 acres of clover.

2. Now, according to the above, to how many colonies

ought I to increase each colony to the coming year, if it is a good honey year? J. J. W.
Mayking, Ky.

ANSWERS.—1. For a beginner, I should say the best thing is to commence on honey, and only after further experience can he decide whether it will be better to run into any other line. Different persons have different ability, and surrounding circumstances may make a differeuce. It may turn out that you can make more money producing honey than anything else you can do with bees, and it is possible that after a little experience you could make it profitable to sell queens, nuclei or full colonies. But commence on the honey, and if you have the aptitude for it you may grow into one of the other lines.

2. If the year is good, and you don't care for honey, you may have two new ones from each old one, and you might go a good way beyond that, increasing each to five or six, but in that case the great danger is that they will be so weak that you would not get them through the next winter. Better be satisfied with a moderate increase and be safe, then if the season is extra-good you can have some honey besides.

Straightening Combs—Empty Brood-Combs.

1. My bees are in bad condition, as my father took care of them, or kept them. Some of the comb is crooked and some crosswise in the frames. Would it be advisable to straighten it in the same way as when transferring bees? And how soon can it be done?

2. If honey sections are left on in the fall, and are not fit for the following summer, how soon can they be taken off in the spring?

3. My brood-frames are just one foot square. If part of them are empty at one end, would it be advisable to take them out and insert a honey-board to keep the brood warm until they get stronger and need it? D. E. D.
Whittington, Ind.

ANSWERS.—1. Don't meddle with the frames till the bees get fairly to work gathering on fruit-bloom. If only two or three frames are out of shape, you can cut loose the crooked parts and fasten them in straight as in transferring, but if they are all crooked, you better consider it the same as a box-hive. One advantage, however, over a box-hive is that you can get the combs out easier. With a long knife cut loose the attachments at the sides of the hive, then turn the hive upside down and dump out all the frames in a lump, and you have it so you can see what you're doing.

2. At fruit-bloom.

3. It will help keep them warmer, providing there is no open space at the ends of the board, but only underneath so the bees can pass under.

Gallon Crock Feeder—Sugar for Feeding.

1. In using a gallon crock feeder, does the plate want to be bottome-side up when on the hive, the same as a crock?

2. Will coffee A or light brown sugar do for stimulating, as well as the granulated? W. C. H.

ANSWERS.—1. Put the sugar and water in the crock, put the plate on upside down, then turn the whole thing over, and your plate will be right side up and your crock upside down.

2. Yes, when bees are flying every day it makes little difference what kind you feed, only so the bees like it. But look out not to go to feeding before the bees go to flying.

Substitutes for Natural Pollen—Rendering Wax.

During the spring of 1894, shortly after the blizzard of March, I noticed my bees were gathering pollen from some source. Knowing that the soft maple bloom was all frozen, I thought I would look around and see where they were gathering their supply from. Passing by an out-building, I noticed quite a number of bees flying in and out of the open door. I passed in, and was amazed to see the top of a box of corn-meal left open, and the bees simply carrying it off by the pocketful.

But to-day (March 11) I was more surprised than before. I was sitting near a colony which was surrounded by a thick layer of clean sawdust over the ground, and on this sawdust there were 23 bees at one time busily working in their efforts to gather the sawdust, and they gathered it, too. Indeed, it was very interesting to see them. They would first work standing on the sawdust, and then when they had gotten some of the finer particles collected, would rise probably ¾ or one inch above the pile, and while sustaining themselves by their wings in the air, would convey the dust to their pollen-basket.

1. Now, what use could that sawdust be put to inside the hive?

2. Will corn meal stimulate brood-rearing if given at a time when there is no pollen to be gathered?

3. I have quite an amount of brood-combs that I wish to extract the wax from. Please tell me the best common method of so doing, and getting a good quality of wax, as I understand that wax rendered in iron vessels is generally quite dark colored.

4. Does the color of wax generally affect the price?
Weston, Ohio. N. T. S.

ANSWERS.—1. It is a common thing to see bees work on sawdust in the spring when no pollen is to be had. It contains, I suppose, some of the material that's in pollen.

2. I've fed bushels of ground corn and oats to the bees when they could gather no pollen, and it probably does nearly as well as pollen, but as soon as they can get the genuine article they neglect the substitute. They take only the fine particles of the corn and oats, and the rest can be fed to cows and horses.

3. Break them up fine while so cold as to be brittle, then soak a few days in water, then extract in a sun extractor. If you haven't a sun extractor it will pay you to get one if you keep five colonies of bees. If you don't want to get one, you can extract in this way: Take an old dripping-pan, split open one corner, put the bits of wax in the pan, and put the pan in the oven of your cook-stove, having the pan tip a little so the wax will run out of the split corner. This open corner you must have projecting out of the oven, and a dish standing on the floor to catch the melted wax.

4. Yes, bright wax will sell for a higher price.

A Young Lady's Experience and Questions.

My papa gave me a swarm of bees on my 16th birthday, and I was delighted. I thought I would have honey to sell, also a swarm or two of bees last summer. But to my astonishment and disappointment they neither swarmed nor gave me any surplus honey. But they would come out and hang on the outside of the hive in great clusters, and at night all go back in. They did this for weeks. What caused them to act so? Do you think they had an inferior queen? I thought I would get me a new queen. Which would you advise—a Carniolan or Italian queen? My bees were bought for Italians.
Hadley, Mich. L. E. W.

ANSWER.—Before saying what the trouble was, I'd like to know what other bees did at the same time. It's possible that the season was so bad that bees in general did nothing. I'm more inclined to this opinion than to say the queen was bad. For she must have been pretty faithful at laying to have so many bees that they were hanging out. And that's exactly what you might expect a strong colony of bees to do if there was little or no nectar to gather. Unless other colonies did well while this one was idle, I don't believe I'd get a new queen. At least give the old one a fair trial. I think I'd rather have Italians. I hope your bees will do better the coming season.

A Colorado Sample of Comb Honey.

I have taken the liberty of sending to you to-day, without your permission, a one-pound section of honey that was produced here during the past season, and where the bees were located is at an elevation of 7,874 feet. I see by the American Bee Journal that honey is produced in extreme northern climates, but I have failed as yet to see any mention of altitude. I am aware of last year's honey-crop being short, so I am willing to help out a friend (even if it be a strange friend) in time of need. I have only a few colonies.

If it isn't too much trouble for you, I would like to have you tell me what the honey was produced from. I am old enough to know these things myself, but this is my first experience. The Rocky mountain bee-plant is quite plentiful here, but I failed to see the bees working on it. The first bloom here is yellow willow, next sarvisberry, and third, choke cherry, and then alfalfa, but the alfalfa is several miles off.

I will also send you a few seeds from a stalk that grew near by that the bees were on early and late. The stalk grew 7 feet tall, and I should judge it had as many as 500 blossoms at once. The smell was very offensive. The stalk mentioned

resembled the hollyhock more than any other that I can compare it to.

I would have sent the sample to Friend York, but I am afraid of editors, but not of doctors. S. M. B.

Aspen, Colo.

ANSWER.—It's a great shame that at your age you're not able to tell so simple a thing as to say what honey is made from! But it may be some comfort for you to know that you're not alone, for I'm not yet old enough to tell what the honey is that you were kind enough to send me. Indeed, it isn't the easiest thing to say always from what source honey is obtained. There are a few kinds, such as linden and buckwheat, so distinctive in character that one can name them at once, but many others it's hard to be sure about. The section in question is nicely filled out and capped, but quite yellow in color, making one feel sure that the honey is rather dark. On cutting in, however, the honey is found to be very light. It is candied solid, but there are no cracks in the comb as when it has been frozen. I should judge it was strongly inclined to granulation. Nothing very remarkable about the flavor, but I don't know it. A Colorado man would be more likely to spot it.

I've no idea what the plant is of which you speak. When next in bloom, send leaves and flowers to the editor, and he'll probably have it named for you. Don't be afraid to send to Editor York. If you'd see his pleasant face once you'd never be afraid of him again.

Who produces honey at a higher elevation than 7,874 feet?

Something for Swarms to Settle On.

What is the best to put up in a bee-yard for bees to settle on when they swarm? H. M. P.

ANSWER.—That isn't so easy to answer, especially without knowing what's already in your yard. If trees are there now, it may be the bees will have their own notions about it, and will not take your hint to settle on something else. You might suspend from a tree or a pole something to look like a cluster of bees. Some use a bunch of dried mullein tops, and some string on a lot of dead bees. If no trees at all are present, you might get a good-sized bough of a tree and plant it in the ground, say one five or six feet high. Of course the leaves would die and wither, but it would still answer the purpose.

The Sunny Southland.

CONDUCTED BY

MRS. JENNIE ATCHLEY, BEEVILLE, TEX.

Thinks the 8-Frame Hive Too Small.

MRS. ATCHLEY:—I write to find out a few points about the 8 and 10 frame hives. I have 20 colonies of bees in 8-frame hives, but I don't believe they are large enough for this locality. I hived several fine swarms last season, and they worked all the time, but kept their hives filled with brood until the honey-flow had stopped, and then had barely enough honey in their hives to winter on, and will have to be fed in the spring. Now, if I had used 10-frame hives, would they have filled the two extra frames with honey, or would they have reared more brood in proportion to the size of the hive? I would also like to know which you think the best for comb and for extracted honey.

Bees are doing well here, what few there are. The wild peach will soon be in full bloom, and if the weather is favorable, then they will go to rearing brood right sharply. Our best honey-flow comes about May 10, and is principally from the holly, willow, yellow-wood, etc. I am going to try some 3-banded Italians this year. I have tried the 5-banded, and must say that while they have some very good habits they have some very bad ones. I have several colonies of hybrids that are the best honey-gatherers I ever saw. If they only wouldn't swarm so much! One colony swarmed five times in two weeks, last season, and they are all doing very well, too, and haven't been fed an ounce of anything. I can say one thing for the Italians—the robber-bees and moths will soon starve around them. J. B. SPURLOCK.

Spurger, Tex., Jan. 31.

Friend Spurlock, I do not think it was the 8-frame hive that caused you to get no honey—it must have been your season, or the bees not in proper condition to gather it. You do not say whether you used single or double stories. Of course, if you only used single-story hives, a 10-frame hive would be best. But this question, 8 or 10 frame hives, is a hard one, and I do not think there is as much difference as some bee-keepers imagine. You say the bees worked all the time, and kept the hive filled with brood. Maybe you had a season that just gave honey enough for the bees to build up and breed with, and not enough to store any surplus.

I think if you will try 8 and 10 frame hives side by side, putting on upper stories or section-cases, you will not find much difference in the two hives. For plenty of room, tier up, and you will get plenty of room with either hive. I used to think that I could get more honey with a 10-frame hive, but maybe it was because I only used them, and did not try the 8-frame when I was producing comb honey. I do not think now that I would have much choice in the 10 and 8 frame. I think you would have gotten more brood with more frames, and about the same amount of honey you did get. I like either hive for both comb or extracted honey. I think your bees swarmed too much to gather honey.

Bee-Culture in Mexico.

I consider this a splendid field for bees, but the natives are far behind in bee-culture. In fact, I have never seen anything but a common gum owned by a native. There are some foreign bee-keepers here who are doing well, but none in this section. This is an elegant climate for bees; very little cold weather during the entire winter, with early spring. I own a very nice, small orchard, ¾ oranges, and ¼ deciduous fruits. I only recently came here for my health, and I am highly pleased so far. W. H. COVINGTON.

Monte Morelas, Mexico.

Saw Funny Doings in the Bee-Business.

My bees did fairly well last season. I sold 1,480 pounds of honey from 28 colonies, and increased to 55. I left them on Aug. 1, and did not see them until Dec. 14, when I found two colonies dead, but the rest were in good condition. I was all through the South and East. I saw some very nice apiaries, but generally kept on the "rustle for yourselves" plan. Some were in the old box-hives with "king-bees!" When I told of gathering as much as 130 to 180 pounds from one colony, they thought I was telling a rather big fish-story. I saw some very funny doings in the bee-business: if I could only tell them, but I am no writer. A. BISHER.

Baird, Tex.

Honey to Produce One Pound of Bees.

MRS. ATCHLEY:—Seeing in the bee-papers some time ago about how much honey it takes to produce one-pound of bees, I wish to make a suggestion. If you will try the following, I think there will be more certainty in it:

When honey and pollen is coming in plentifully, take about three pounds of bees, give them one worker-egg to rear a queen; then take three pounds of bees and give them all the worker-eggs they will care for. Then when the brood is sealed, weigh each lot and see what the difference is. Of course, everything must be equal—the same amount of honey, same size combs, etc., same age bees. Give both the same amount of honey, and keep them confined, and ventilated, and this will give about as near an even test as we can well get. Try this, and report. H. VOGELER.

Paso Robles, Calif.

Friend V., I am too busy just now to give your scheme a test, and have given it out to the readers of the American Bee Journal, to see who will try it and report. I suppose you allow the broodless, or the one with only one egg, to rear a queen to keep them quiet. Somebody try Mr. Vogeler's plan, and report. JENNIE ATCHLEY.

That New Song—"Queenie Jeanette"—which is being sung everywhere, we can send you for 40 cents, postpaid, or club it with the American Bee Journal for one year—both for only $1.10. Or, send us one new subscriber for a year (with $1.00), and we will mail you a copy of the song free.

Please Remember that I am *not* a dealer in bee-keepers' supplies, so do not send to me for a catalogue, etc.—EDITOR.

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REV. EMERSON T. ABBOTT - - "NOTES AND COMMENTS."

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Editorial Budget.

Don't Be Caught without all the necessary hives, sections, comb foundation, etc., when the time comes to use them. It doesn't pay to wait till the last minute and then be compelled to telegraph for goods. Better get all you need long before the busy season begins, for if delayed too long supply dealers may be too much rushed to fill your orders promptly, and thus cause much loss and annoyance to you. Again I say, don't be caught!

Advertising Pays.—One of the largest Western bee-supply advertisers in the American Bee Journal wrote to me in this wise, March 18:

We now have more business than we can handle. We don't know what is the matter this year. We never had such a trade. I have about 40 letters before me now unanswered, and they're gaining on me every day. If this thing keeps up, I will be a dead man before the summer is over. I have been thinking of taking out all of our advertisements of supplies, and pay for them the same as if they were run to the end of the contracts.

I hope others may be able to write as encouragingly before the season of 1895 is over. It's another illustration of the fact that judicious advertising pays. And the next few months is the time to do it in the bee-business.

A Good Editorial by Mr. Hutchinson in the March Review, on "Journals of a Miscellaneous Character," was called out by the American Bee-Keeper having recently begun the "miscellaneous" business. After saying that class journals should stick to their text, and yet assuring his readers that "there is no occasion for any quarrel over the matter" if they don't, Bro. H. closes with this fair and generous paragraph, which I most cordially endorse:

Let no one think that I wish all journals to be like mine; nothing of the kind. I am making a journal according to *my* ideas, and it attracts readers of similar tastes. Other men are making journals according to *their* standard, and I am not surprised that they find readers. The world is wide, and there is room for us all. Let each spend his energies in doing his very best as he understands it, instead of finding fault with those holding views that differ from his own.

Another Northwestern.—Last week I said that there had been a little talk in some quarters about forming another Northwestern Bee-Keepers' Society to meet every fall in Chicago. Mr. W. Z. Hutchinson, the Secretary of the old Northwestern, has this to say in regard to it:

FRIEND YORK:—I was not present when the Northwestern merged its existence into the Illinois State Bee-Keepers' Association. I was late in getting to the meeting that session. If I had been present I should have opposed it. There is no city on this continent where so many practical honey-producers can be gathered together as in Chicago. Most people within 200 or 300 miles of Chicago like to visit that city as often as once a year. Almost every fall there are reduced rates for some reason or another, and this is the time of the year when bee-keepers can most easily leave home. There ought to be a convention of bee-keepers in Chicago every fall. Not simply a State convention, but a district convention—one in which bee-keepers in Michigan, Illinois, Wisconsin, Indiana, Ohio, Iowa and Minnesota will all feel that it is *their* convention just as much as it is that of Illinois.

Some said, "What's in a name?" There is a good deal in it. I would go to a Northwestern convention when I would not go to an Illinois State. If Illinois wants a State convention, and I think she does, and ought to have, she could hold her State convention in the spring, or several months from the time that the Northwestern met. A State convention is always largely a local affair, and I don't think that the holding of a Northwestern convention in Chicago, away to the north end of the State, would seriously affect the holding of a meeting at Springfield, unless the meetings were held at nearly the same time.

For one, I am in favor of organizing another Northwestern association to meet each autumn in Chicago. I would not do this in any antagonistic mood towards the Illinois State, for I have no such feeling towards them, and should most sincerely desire their co-operation. Let the matter be discussed—I am willing to abide by the majority.

Flint, Mich. W. Z. HUTCHINSON.

Truly, Mr. Hutchinson offers some pretty good reasons why there should be another Northwestern bee-keepers' society organized. What say others who are interested in this matter?

Sulphur Acorns.—A sample of sulphur acorns is received from a Connecticut firm, intended for use wherever it is desirable to fumigate with sulphur. Balls of sulphur, perhaps combined with some other ingredient, are made in the shape of an acorn, these acorns being made of any size desired. They light readily, simply by touching a lighted match to them. For the use of bee-keepers whenever it is desirable to fumigate with sulphur, they would certainly be a great convenience, the only question being as to expense.

Mr. S. J. Baldwin, who made a pleasant call at the Bee Journal office during the World's Fair in 1893, and who is one of the very prominent bee-men of England, wrote me in a letter dated March 4, that his three months' trip to and in our country "wrought a most wonderful change and improvement" in his health. He is seriously thinking of repeating the trip this year, in the autumn, which I trust he will do.

The Sweets that Waste (see pages 173 and 174) would have been "sweeter" if no error had occurred in putting it in type. Read it again, and then when you come to the 18th line from the top of page 174, read thus: "will seek the right for the joy it finds in it, and they will love the farm and all that pertains to it," etc. That whole "comment" is worth reading over about four times. It's a gem.

Sweet Clover or Melilot has been referred to very frequently in the American Bee Journal as an excellent honey-plant. Mr. M. M. Baldridge, of St. Charles, Ill., recently sent me what he calls "Special Bulletin No. 2" on "White Melilot or Melilotus Alba," and from that 4-page

bulletin I have taken the liberty to reproduce the following closing paragraphs for the Bee Journal readers:

Melilotus is also a first-class honey-plant. The honey therefrom is of light color, and of very fine quality. The plant is a profuse bloomer, and it remains in blossom several weeks at a time. The blossoms are so minute and numerous that the bees are able to secure therefrom a large amount of honey, which, to the bee-keeper who grows melilotus, is an additional profit. Even if melilotus had no other value it would be profitable for bee-keepers to grow it for honey alone. I have been practically acquainted with melilotus for about 35 years. My first acquaintance with this plant began in western New York in 1858. In 1861 I came to northern Illinois, and since that year I have had an extensive yearly acquaintance with the plant, as it grows here luxuriantly, and in great abundance. On the richest land here the plant, when permitted to attain its full growth the second year, often reaches the height of 6 to 8 feet. The seed matures here in August and September, but in the South it ripens in July and August.

WHEN TO SOW THE SEED.

The seed of melilotus may be sown at any time of the year in the North; but, in the South, the best time, so I am reliably advised, is early in the fall or spring, or late in the winter; in short, the very best time being from February to to April, either alone or with grain. The better way is to prepare the ground by plowing and harrowing, as for grain, and then harrow the seed in. This plan insures a good "catch." In Kansas, where melilotus is grown successfully, and extensively as pasturage for hogs, the practice is to cover the seed, if possible, from one to two inches deep, or even deeper. This may be done by means of the drill. The seed should not be sown mixed with grain, but separately, and at the rate of from five to ten pounds per acre; but some prefer a thicker seeding of from 15 to 20 pounds per acre. For honey alone, five pounds of seed per acre is ample, as the plants stool better, and will remain in bloom longer; but, of course, is not so desirable for hay, or pasture, as the plants are not so fine and numerous as with the thicker seeding.

HOW TO SECURE THE SEED.

I have this year (1894) taken pains to secure a large supply of the seed, and, from what I know, is the genuine melilotus alba. Now, to any who may desire to seed down a small plat of ground to melilotus, and as an experiment, it will give me pleasure to mail a package of the seed on request, but on condition that they will, at the proper time, report to me their success, and also that they will send me enough postage to cover the expense of mailing the seed.

St. Charles, Ill. M. M. BALDRIDGE.

The engraving of sweet clover shown above is considered by Mr. Baldridge as being the best he has ever seen. I reproduced it last year for these columns from a picture in an old Government Report.

Among the Bee-Papers

Conducted by "GLEANER."

GIVEN FOUNDATION MADE ON ROLLS.

Gleanings says they have been experimenting, and are now working on a set of rolls on which they expect to make an exact duplicate of foundation made on the Given press, in which shall be all the good qualities of both the rolled and the Given foundation. A consummation greatly to be desired. But we'll wait and see.

QUEENS TO FOREIGN COUNTRIES.

Doolittle, in Gleanings, says he concluded from experiments made by confining queens at home, that 26 days' confinement was the limit. He afterwards found that a queen he sent to Australia by express, being accidentally delayed at San Francisco, was actually 65 days on the way! The queen was all right. Besides the "Good" candy, he puts into the cage a piece of comb with a few cells of unsealed honey and the rest empty cells, so that the bees can store the candy in the cells if it gets too soft.

SWEET CLOVER IN DALLAS COUNTY, TEXAS.

Cows prefer sweet clover. I have two acres of this adjoining the alfalfa. The gate opens just on the line between the two. I soon noticed the cows turning to the sweet clover. I then noticed very closely; and since that time, without a single exception, the cows would first turn to the sweet clover. This satisfies me that cows prefer it; but, like alfalfa, it produces the very best of milk and butter. I have tried all the different varieties of clover here. Alfalfa and sweet clover are the only two that will make a success in this part of the country.—J. D. Givens, in Gleanings.

IN-BREEDING OF BEES.

At the big German convention Herr W. Vogel related that he had visited a bee-keeper in 1857 whose father and grandfather had kept bees, the grandfather by the hundreds of colonies. Herr Vogel found the number reduced to two colonies, the bees being small, with little energy. Inquiring, he found the nearest bees were miles away, and he advised the purchase of two or three colonies from a distance, to infuse fresh blood. The advice was followed, and five years later the man wrote, "My apiary is flourishing."

SOME LOCKED-UP HINTS,

On page 168, Mr. M'Neal objects to Mr. Chapman's giving a hint and then putting the key in his pocket, and before he gets through Mr. M'Neal does the very same thing himself. He says, "Clipping the queen's wings down to mere stubs.... is not entirely without merit"—but doesn't give the slightest hint wherein the plan has any merit over the usual way of clipping.

Putting in foundation with glass and hot water may suit him very well if he has tried nothing better, but has he ever tried one of the best foundation fasteners?

His idea as to the cause of swarming is original, and is worth thinking about.

COMB AND EXTRACTED HONEY FROM THE SAME APIARY.

In an article in Progressive, G. M. Doolittle winds up thus: "I conclude that it is the most profitable for the apiarist to work for both comb and extracted honey in the same apiary, rather than to have two separate apiaries, one to be devoted to the production of either kind exclusively."

ABUSE OF THE SMOKER.

It seems to me no humane person should want to use a particle of smoke more than necessary, for surely it isn't pleasant for the bees; but, really, is it as bad as one would be led to think from reading page 174? The injudicious use of the smoker is there charged with an indefinite amount of mortality among the bees. Whilst granting the unpleasantness to the bees and the cruelty on the part of the operator, I am somewhat skeptical as to the "mortality" part. I once wanted to get some bees out of some combs that I could not brush, and smoked them very heavily without success. I then concluded I would kill them, and gave them a pretty heavy dose of brimstone. Those bees dropped, but after getting the air became lively as—bees. Try it sometime, and see if you can make wood-smoke dense enough to actually kill a bee.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Correct.—"When honey is mentioned as frequently as other foods; when honey is looked upon in its proper light as an economical and staple article which should be found upon every table as butter now is; when that time comes, bee-keeping will have reached its proper development."—Editorial in Canadian Bee Journal.

This is very well and truly said, and the indications at present all point in the direction of a more thorough knowledge of the true value of honey on the part of the general public. If we had more men like Friend Holtermann who go about the country preaching the gospel of sweet things, this consummation so much to be desired could be hastened forward more rapidly. The bee-keepers are very much to blame for this lack of knowledge on the part of many people, as they have been inclined to devote too much time to the discussion of things of interest to themselves, and have had but little thought of the general public in all they have said and done. If bee-keepers do not advertise the honey-business to the world, who will?

What are They?—"By no stretch of the imagination can bees be classed as animals."—British Bee Journal.

If not animals, what are they? They are surely not vegetables nor minerals. I have a faint remembrance of reading a long time ago of "three kingdoms," and the bee must surely belong to one of them. It seems to me "by no stretch of the imagination" can a bee be called anything else but an animal.

Go Slow.—"I do not see how he could conscientiously write the article, *unless he, a friend, or some one else whom he wants to defend is guilty.*"—D. S. Jenkins, on page 179. (The italics are mine).

It is evident to me that Mr. Jenkins failed entirely to comprehend the spirit of the article which he attempts to criticise, but I want to say just here and now, and once for all, that no man must say in public print, or even hint, that Emerson T. Abbott adulterates honey, or winks at it on the part of his friends. Mr. Jenkins may hop onto any of my arguments which may not suit him, but he would better go a little slow about suggesting that I may be guilty of a *fraud.*

Now, Mr. Editor, let me suggest that you do not give space to any suggestion of this kind again; for, if any man shall venture to charge me with adulteration in public print, he may stand a good chance of getting into trouble, let his name be what it may. I suggest, in all fairness, that Mr. Jenkins read his letter over again and see if he does not wish he had not put it just that way. I may have something to say of the merits of the article to which he refers, in the future.

[I don't believe that anyone would for a moment think that Mr. Abbott would do such a thing as Mr. Jenkins hinted at. Mr. A. is not that kind of a person, and surely Mr. J. did not realize what he was uttering. I trust Mr. Abbott will accept my own apology for allowing it to go in at all. I mean to be careful, but, like most other people, I am not above making mistakes.—THE EDITOR.]

Shall We Go Back to Box-Hives?—"Of the many experiments I have tried, there is but one plan that has proved successful and practical, and that is to keep bees in old-fashioned box-hives for breeders, taking the honey for market from the new swarm."—J. F. Gates, in American Bee-Keeper.

I am not sure but there is more in this suggestion than one would be inclined to think at first, but let this be as it may, there is, no doubt, a valuable point here for the beginner, the following out of which will be of value to him in more ways than one. I have long since ceased to urge upon people who have bees in box-hives to have them transferred, as I think this is always done at a loss. Leave the bees where they are, as there can be no question that they will winter better in such hives than they will in any modern hive. When spring opens, confine them to the lower story, if the box-hive has an upper story, as many do, and let them alone until they swarm. Have some hanging-frame hives ready, with the frames filled with foundation, and as soon as the swarm is out, move away the box-hive, and set the new one in its place. Set the box-hive just behind it with the entrance turned in the opposite direction, and then hive the swarm in the new hive. The second day turn the box-hive around, and set it by the side of the new one. Leave it there two or three days, and then move it to some other part of the yard and let it alone.

Now put a set of sections filled with foundation on the new hive, and see how quickly they will be working in them. When the first lot of sections are about half full, lift them up and put under them as many more fixed in the same way, and see how quickly this colony will fill both of them.

In many localities the box-hive colony will not swarm any more. If it does, put two such swarms together and then treat in the same way. You will soon have all the bees you want in modern hives, and at the same time save yourself a good deal of fuss and muss, and perhaps some dollars which otherwise you might have paid some would-be "bee-tamer" to transfer them.

Good Advice.—"Avoid the handling of bees and opening of hives during the spring."—R. F. Holtermann.

Here is good advice especially for beginners. I have been of the opinion for a long time that it is very injurious to open the hives frequently during the early spring. A great many have the idea that they must examine the bees every day to see how they are coming on. In my opinion this is a very great mistake. Especially is this true if said examination involves opening the hive and taking out all the combs. It is a very easy thing to chill the young, tender brood when there is a cold wind blowing. Even though it is not cold enough to do this, it disturbs the bees and causes them to lose that much time.

The longer I keep bees, the more I am convinced that the less they are disturbed the better it is, and this is true with emphasis during the early spring months. The bee-keeper should learn to judge of the condition of a colony by a glance at the entrance. If this does not prove satisfactory, then a hasty examination of the brood-chamber may be made, removing as few combs as possible. Of course, there are times when it may be necessary to remove all of the frames and examine them carefully, but I am quite sure that the less frequently this is done the better it will be for the bees.

Canadian Beedom.

Conducted by "BEE-MASTER."

Climatic Conditions.

This a very important practical subject, especially in connection with the winter problem. There is much discussion among bee-keepers as to the relative merit of cellars and out-door wintering, and in the course of argument, differences of climate are often forgotten. The gist of the matter was well stated at the last annual meeting of the Ontario Bee-Keepers' Association, by Mr. R. H. Smith, of St. Thomas, as follows:—

"Our first experience was with clamp wintering packed in chaff, but later we found a good cellar less labor and more satisfactory where such long, cold winters and low temperatures are the rule. Now that we are located in the southern part of the Province we find clamp-wintering to be the best for the following reasons: The bees are never moved from the summer stand but are packed in the same position as they have been all summer, consequently they do not require moving together as for the old system of clamp-wintering or carrying into the cellar. The bees can always get a flight if the weather is fine enough as it usually is several times during the winter with us, but the greatest saving is in the spring when setting-out time comes they do not have a general flight as cellar-wintered bees, with the attendant risk of swarming-out, when some colonies will get too many bees and others be depopulated. It also covers what is generally considered essential, and that is spring protection, as they are not unpacked till settled warm weather. This plan is less expensive than chaff hives, and better in many ways than packing each hive separately."

Cellar-wintering for Muskoka, a point very far north, and clamp-wintering for St. Thomas, a point well to the south in Ontario, seem to be the conclusions arrived at by Mr. Smith as

the result of a long experience in the north, and a brief trial of the south. While he was about it, he might have told us some at least of the "many ways" in which clamp packing of hives in quartettes is better than packing each hive separately in chaff hives. I have never tried the clamp method, thinking the single plan more convenient. The clamp method is often advocated for economy of warmth, but two or three inches of greater width in the double walls will make things even under that head.

This is my fourth winter's trial of a small house-apiary and, so far, I think it the best of all methods of out-door wintering. The packing can be gradually done as autumn deepens into winter. There is no trouble with heavy covers. Each colony is readily accessible at all times. It is but to brush aside the loose covering of forest leaves, chaff, cork dust, or what not, and you can investigate any colony desired. Then in spring, the unpacking can be done gradually as the packing was done in the fall.

On the score of economy, the house-apiary "takes the cake." It can be built of the same rough, cheap lumber as the clamps, and even with the commonest material can be made to look neat and artistic. Then there is no trouble clearing away the rough cases and packing when warm weather comes to stay. The house-apiary is good for all the year round. In summer, it furnishes shade and ventilation for both bees and bee-keeper, with shelter that makes manipulation practicable in all weathers, and at all times, both day and night.

Lambton and Brant Bee-Keepers' Conventions.

The annual meeting of the Lambton Bee-Keepers' Association was held in the village of Wyoming, Feb. 24. There was a number present, some of whom drove a considerable distance. The president, Mr. Mowbray, occupied the chair in his usual able manner. The minutes of last meeting were read and dopted, and the secretary-treasurer presented his report, after which Mr. C. Boyd and W. Granger were appointed auditors, who found the books correct. The election of officers and directors for the ensuing year then took place, which resulted as follows:

W. Mowbray, Sarnia, President; C. Boyd, Petrolia, Vice-President; J. R. Kitchin, Weidmann, Secretary-Treasurer; directors, M. A. Jones and G. Forbis, Kertch; W. Granger, Wyoming, and Jno. Armstrong, Wansted.

The Brant Bee-Keepers' Association met at the Court House, December 15, 1894. Amongst those present were Messrs. Patterson, Shaver, Morris, Berkett, Edmonson and Holtermann. The Secretary's report showed a balance on hand of $5.43, members having been furnished the Canadian Bee Journal upon payment of extra fee of 25 cents. The accounts were audited by Messrs. Morris and Patterson and found correct. Election of officers resulted as follows:—

R. F. Holtermann, Brantford, President; James Shaver, Cainsville, Vice-President; C. Edmonson, Brantford, Secretary-Treasurer. Delegates to the Ontario Bee-Keepers' Convention, Stratford, Messrs. Edmonson and Patterson.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Mar. 18.—Demand is good for all grades of honey excepting dark comb. We quote: Fancy comb, 15c.; No. 1, 14c. Extracted, 5@6½c. J. A. L.

CHICAGO, ILL., Mar. 7.—During the past two weeks a good movement has been felt in the market. Sales have been in small lots, but quite frequent. We quote: White comb of the highest grade, 14c.; off in color, 13@13½c.; yellow, 10@11c; dark, 7@9c. Extracted, 5½@7c.—the higher price for white in 60-lb. cans.
Beeswax, 28@30c. R. A. B. & Co.

KANSAS CITY, MO., Mar. 14.—Demand is fair for comb and extracted. We quote: No. 1 white, 1-lbs., 14@15c.; No. 2 white, 12@13c.; No. 1 amber, 11@12c.; No. 2 amber, 10@11c. Extracted, 4½@6½c. Beeswax, 22@25c.
C. C. C. & Co.

CINCINNATI, O., Mar. 19.—Demand is slow for extracted and comb honey, with a fair supply. We quote: Comb honey, 13@16c. for best white. Extracted, 4@7c.
Beeswax is in good demand at 25@28c. for good to choice yellow. C. F. M. & S.

PHILADELPHIA, PA., Feb. 15.—Comb honey is very plenty and slow of sale at 12@13c. Extracted in fair demand at 5@6½c.
Beeswax scarce at 30@31c. W. A. S.

NEW YORK, N. Y., Feb. 20.—We are gradually working down our stock of comb honey, and the indications are that we will succeed in disposing of all of the white honey and possibly all of the dark during the spring, at following quotations: Fancy white, 1-lbs., 12c.; fair, 10c.; buckwheat, 8@9c. The market is well supplied with extracted honey. Demand is fair for choice grades, while common stock is neglected. We quote: White clover and basswond, 5½@6c.; buckwheat, 5@5½c.; Southern, 45@55c. per gallon, according to quality. Beeswax firm and in good demand at 30@31c. H. B. & S.

BUFFALO, N. Y., Mar. 16.—The honey market is getting quite well cleaned up here. We quote: Fancy, 13@14c.; choice, 11@12c.; buckwheat and commoner grades, 7@8c. Extracted is in very light demand here, and we would not advise shipments. B. & Co.

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6A13t Please mention the Bee Journal.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.
J. A. LAMON, 43 South Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.
F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 28 & 30 West Broadway
CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.

Kansas City, Mo.
C. C. CLEMOMS & Co., 423 Walnut St.

Buffalo, N. Y.
BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.
CHAS. DADANT & SON.

Philadelphia, Pa.
WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.
C. F. MUTH & SON, cor. Freeman & Central avs.

Convention Notices.

MINNESOTA.—The regular semi-annual meeting of the Southern Minnesota Bee-Keepers' Association will be held on the first Monday in May, 1895, at LaCrescent, Minn. All bee-keepers invited. E. C. CORNWELL, Sec.
Winona, Minn.

UTAH.—The Utah Bee-Keepers' Association will hold their semi-annual meeting on Thursday, April 4, 1895, at 10 a.m., in the Fish Commissioner's rooms in the new city and county building, Salt Lake City.
Provo, Utah. GEO. E. DUDLEY, Sec.

WASHINGTON.—The next meeting of the Western Washington Bee-Keepers' Association will be held on Monday, April 8, 1895. Subjects of interest to bee-keepers will be discussed. Bee-keepers are invited to attend.
Tacoma, Wash. L. D. LITTOOY, Sec.

TEXAS.—The Texas State Bee-Keepers' Association will hold its 17th annual convention at the apiary of W. R. Graham, in Greenville, Tex., on Wednesday and Thursday, April 3 and 4, 1895. All interested are invited to attend. "NO HOTEL BILLS."
Ft. Worth, Tex. DR. WM. R. HOWARD, Sec.

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Wants or Exchanges.

This department is only for your "Wants" or bona-fide "Exchanges," and such will be inserted here **at 10 cents a line** for each time, when specially ordered into this department. Exchanges for cash or for price-lists, or notices offering articles for sale, will not be inserted here—such belong in the regular advertising columns, at regular rates.

WANTED—25 to 100 Hives of Bees. Who can furnish them the cheapest? I will give in exchange for bee-hive machinery, Queens bred from a straight 5-banded breeder valued at $50, or from best imported stock.

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TO EXCHANGE—Sections or Queens, for Basswood Trees. I. J. STRINGHAM,
13A2 105 Park Place, New York, N. Y.

General Items.

Good Honey Year Expected.

We are now having spring weather, and bees are in fine condition. They have wintered well, notwithstanding the severity of the weather, and everything points to a good honey year in East Tennessee. Sam Wilson predicts a light flow from basswood and sourwood, but we hope that he has recovered too early. H. F. COLEMAN.

Sneedville, Tenn., March 12.

Her Bees Wintering Nicely.

My bees are wintering nicely, although a great many bees died in this vicinity during the recent cold weather.

The American Bee Journal is a welcome visitor at our house. I could not get along without it. MRS. D. F. HEISER.

Ottawa, Kans., Feb. 26.

Bees Dying with Diarrhea.

My bees are dying with the diarrhea. They had no flight from Dec. 23 to March 5. I winter them on the summer stands. I have 25 colonies. Last year was a poor one here. LUTHER BRYANT.

Carbondale, Pa., March 12.

Prospects for a Good Honey-Flow.

I winter my bees on the summer stands, packed in straw, and so far I have lost but 2 colonies this winter, with plenty of stores, which I cannot account for. I have 18 left yet, with a good prospect for a good honey-flow the coming season.

I commenced in 1891 with one colony, which I got in the woods; in 1892 I bought 6 more, and in 1893 I bought 5 more, but I have never gotten very much honey, it being too dry, but I have always made expenses. In 1893 I had increased to 14. We have had so much honey-dew, and I lost 10 colonies, but I am not discouraged yet, although bee-keeping in this part of the country is considered a small business. But I feel confident it will pay if conducted rightly. J. J. YODER.

Chesterville, Ill., Feb. 5.

Gathering Honey and Pollen.

The bees are getting lots of honey and pollen, and have been doing so for quite awhile, but we will lose a great deal of honey on account of the bees being weak and the flowers ahead of time, which is rather a bad combination. However, if we get another rain it will give us later bloom, and we may gather a large crop.

JOHN W. LEWIS.

Redlands, Calif., March 10.

Cornmeal Pollen—Supers, Etc.

This country is known the world over as the dronth-stricken district, but does not look very drouthy to-day, as we enjoyed a soaking rain which continued all of last night. Two weeks ago there was two feet thick ice on the Republican river; to-day it is sailing over our mill-dam as mush ice. We had but little snow, but on the whole a solid winter after Jan. 1.

I have 28 colonies of bees which are packed in chaff, or rather oat-hulls—as you see by my letter head I am interested in flour and oatmeal business. I have had bees for five years, and have never known them confined to their hives over one month at a time.

There is a great deal of alfalfa raised here which furnishes nearly all our honey. My bees make much trouble about our mills at this time of the year, as they are crazy to get pollen; and as I have heard the question asked many times as to what is best to feed for pollen, I would say I have placed in a long trough in separate piles, wheat flour, wheat Graham, rye flour, rye Graham, ground oats, oatmeal, buckwheat flour, cornmeal (yellow and white), and found the bees would hardly touch anything else until the cornmeal was all gone; it is decidedly their preference, though they go into the mills and ball up the dust from the dust rooms.

Much has been said also regarding supers, many favoring section-holders so as to move the outside sections to the center when the center sections are full, or nearly so. I use a double super, each holding 12 sections; when well filled over the center I change ends with the supers, which brings the outside to the center, and in place of section-holders I nail the pattern slats solid to the super, and leave one side of the super loose, and fasten it on with books. I like the arrangement much better than so many loose pieces. I use 2-story chaff hives of the Champion style; it is an excellent hive, but I am a strong believer in deeper brood-chambers. O. K. OLMSTEAD.

Orleans, Nebr., Feb. 26.

Gathering Manzanita Honey.

My bees are doing well. They have been gathering manzanita honey for the past month. This promises to be a good season for bees. C. W. KERLIN.

Monterey, Calif., March 9.

Prospects for a Good Honey-Flow.

The prospects for a good honey-flow are all right. The bees are wintering well so far. Honey retails for 22 cents a pound. Our main honey-flow is from white clover.

ALVIN T. BALL.

E. Blackstone, Mass., March 11.

Bee-Keeping in Iowa.

Apiculture has run low in this part of Iowa. Ten years ago Lucas county counted her colonies of bees by the thousands; now they won't number as many hundreds. Beemen say that they don't pay expenses any more. And I must acknowledge that it is somewhat discouraging. White clover is all gone, and linden is being destroyed at a fearful rate. Red clover will be our main dependence in the future. I find that my bees can gather honey from red clover when these is nothing else for them.

We have had a nice winter here, only six weeks, and eight inches of snow. To-day (Feb. 28), the bees on the summer stands, are bringing in the first pollen. I have 8 colonies on the summer stands, and 46 in a cave; the latter are very quiet, and are wintering well. I have been in the bee-business for 15 years, and took the American Bee Journal for 10 years prior to this.

I see a correspondent asked Dr. Miller how long a colony of bees could be kept in a cellar. He replied, probably four or five months. I have kept them in my cave six months, and they came out in fine condition every time. WM. MALONE.

Newbern, Iowa.

An Experience with "Foul Brood."

In June, 1892, foul brood got started in my apiary. During that year and the next it got into more than 70 hives. I cured it by the starvation plan. I have 90 colonies to-day, and have seen no foul brood for one year. Now I want to tell how I think my bees got it (which I think will be the most important part of this letter).

I believe it developed in my own bee-yard. I have been so sure of it that I proposed to give Mr. Root, or any other resonsible man, $5.00 if my plan would not produce foul brood. If it did produce it I would give him nothing. He never answered my letter, because he did not believe it was possible, for he thinks that would be spontaneous generation. I do not believe it would, for I claim the germ that produces foul brood is in every young larval bee when in a healthy state. If any one wants to try the experiment, here is the formula: Take a quantity of young

brood just sealed (drone-brood is the best, but take some of both, say five pounds, or more would be better), put it out some cold night, or put it near ice if the weather is not cold. Let it stay one night, then put it in a warm place, about one-third or one-half of the bulk covered in water. Keep it moist and away from bees for three weeks. By this time the germs of foul brood will be developed. The mass of brood must be kept in bulk, and kept moist in a warm place after the first night. If it dries or freezes the most of three weeks, bacillus alvei would not be developed from the germ.

Now expose this to your bees, and note the result. I know this is not in accordance with the views of most bee-keepers, but that does not keep it from being a fact. Certain decomposition will develop the germs that produce most of the diseases of the human family; it will also among the bees.

I do not believe God made foul brood and gave it to the bees in the beginning; if he did not, there was a time when it started.

If anybody, or everybody, wants to say anything against this, just let them say it. It will not hurt my feelings; though I know they are not quite all against me. I believe it was Mr. Coggshall, of New York, who claimed that quantities of chilled brood would cause foul brood.

The authors are correct in regard to the cure of the disease if directions are strictly followed. J. F. TEEL.

Elmont, Tex.

Had Several Good Flights.

Bees have come through the cold all right, so far as I have learned, and they have had several good flights lately.

JOSEPH E. SHAVER.

Friedens, Va., March 4.

Ancient Bee-Superstitions, Etc.

I admire the contributions of the "old man eloquent" of American apiculture—Mr. Chas. Dadant—his early struggles, his failures, and ultimate success. Born, as he must have been, at the time of my honored father, who, in a remote English village 50 years ago, took surplus honey from bees through a "box," as he called it, placed on top of the hive; but there, unlike Mr. Dadant, his ingenuity ceased, for at the fall there was the same wholesale slaughter of bees by brimstone. And as late as 20 years ago, it was religiously necessary to put the bees into mourning at the death of my mother, but when he (my father) died three years after, I failed to do it, to the horror of friends and relatives! But to their surprise the bees lived!

I have kept bees myself for 20 years, off and on; as my business takes me from home, I could never manage but a few. This year I am sowing down, as a trial, two acres of lucerne or alfalfa. Two extra-strong colonies are busy to-day gathering pollen from the willows, I think. They are looking quite green in the distance. The bees are out on the summer stands, with but a sort of shell or empty hive, with gable roof to keep off the rain. Mine are blacks—the only kind I could purchase here, but I will Italianize them next summer.

ERNEST L. ETHERIDGE.

Victoria, B. C., Feb. 18.

Score a Big One for Foundation.

Bees in this vicinity have wintered remarkably well. I have investigated reported losses, and find nearly all perished colonies were in small hives. I am having made a frame that will just fit a dovetailed body and super. I am using full sheets of heavy brood foundation well wired—no starters go with me. They don't pay. I hived two swarms on Aug. 1, 1894, of equal strength—No. 1 on 8 full sheets of foundation, and No. 2 on inch strips of foundation. This was right in the middle of a fine honey-flow.

No. 1 built out their foundation in 12 days, and I placed 8 more drawn-out combs above them. The honey-flow was very heavy, and lasted unabated until Oct. 1. By that time I extracted 128 pounds of well ripened honey, which I got 12½ cents a pound for, making $16. No. 2 lost lots of valuable time in building crooked comb. I extracted 56 pounds from them, which, at 12½ cents, was $7.00; making a difference of $9.00 between the two colonies. The foundation cost me, with wiring, 60 cents for No. 1, and I now have 8 good strong extracting-combs.

This shows that if bees build their own comb it costs the bee-keeper just $9.00 a pound, whereas we can have straight, all-worker comb at 60 cents a pound. I hope this will wake up some of the old fogies, who persist in saying that full sheets of foundation don't pay.

J. C. WALLENMEYER.

Evansville, Ind.

A Splendid Season Promised.

The bees in this section are building up very fast. So far the season promises to be a splendid one for bees.

L. L. JACKSON.

Soledad, Calif., March 6.

A "Testscope" for Wintering.

I have made and used a tube about 4 feet long, and about 2½ inches in diameter, to put to my ear to listen to the bees during the winter confinement. Being 4 feet long, a man can stand while listening to the bees. I can tell every weak colony, and tell every one that is dead, to the very day they die, if observation is made daily, no matter how cold. It is simple and cheap, being made thus:

Take a piece of paper about 3x4 feet, and paste it with flour paste. Have a good smooth stick about 4½ feet long, and 2½ inches in diameter. First roll one round of paper dry around the stick without being pasted, so the stick can be pulled out when the tube is made on the stick by winding the paper on it. It must be borne in mind that the stick must be perfectly straight, and the same size from end to end.

Some of the more expert bee-men might derive some useful knowledge by using the tube, or "testscope," as I call it. My hearing being considerably impaired, I cannot get the best results from it.

When I make an examination with the testscope, I place one end to my ear and the other at the hive-entrance, without disturbing the bees in the least. It is so much better than getting on one's knees in the snow or mud. I do not wish to furnish the tubes. E. M. COOMBS.

Memphis, Ind.

Catalogues for 1895 have been received at this office from the following:

Geo. E. Hiltou, Fremont, Mich.
Joseph Nysewander, Des Moines, Iowa.
M. H. Hunt, Bell Branch, Mich.
John Nebel & Son, High Hill, Mo.
E. T. Flanagan, Belleville, Ill.
Chas. F. Muth & Son, Cincinnati, Ohio.
W. T. Falconer Mfg.Co., Jamestown,N.Y.

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Five cross-bars are rivited in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through. It is easily put together and folds compactly in a case, 1x6x7 inches, the whole weighing but 5 ounces. It can be worn over an ordinary hat; fits any head; does not obstruct the vision, and can be worn in bed without discomfort. It is a boon to any one whom flies bother, mosquitos bite, or bees sting.

☞ This Veil we club with the Bee Journal for one year—both for $1.75; or give free as a Premium for sending us 3 New Subscribers to the Bee Journal at $1.00 each.

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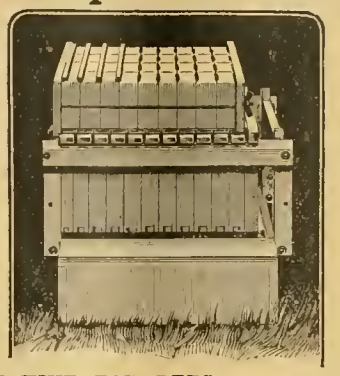

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James Heddon, Dowagiac, Mich.
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A. I. Root Co., Medina, Ohio.
W. T. Falconer Mfg. Co. Jamestown, N. Y.
I. J. Stringham, 105 Park Place, New York.
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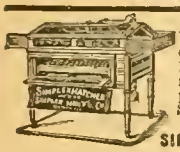

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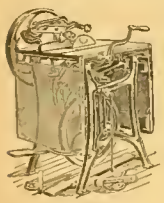

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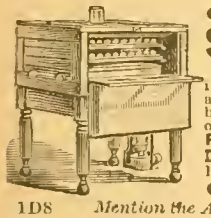

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Question - Box.

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Query 964.—1. Do you practice spreading brood?
2. If so, to what exteut?—Canada.

E. France—No.

R. L. Taylor—No.

Jas. A. Stone—No.

B. Taylor—I do not.

W. G. Larrabee—No.

H. D. Cutting—I do not.

J. A. Green—Very little.

Dr. C. C. Miller—Not lately.

Dr. J. P. H. Brown—Very rarely.

C. H. Dibbern—No; I think it too much trouble.

P. H. Elwood—1. I used to extensively. 2. Not much now.

Prof. A. J. Cook—No. The less the manipulation, the more profit, I think.

Eugene Secor—Not often. It requires too constant attention for an otherwise busy man.

Rev. M. Mahin—No. There is no advantage to be gained by it, and it is liable to do serious harm.

G. M. Doolittle—1. Yes, but not as much as formerly. 2. About twice between May 25 and June 15.

Mrs. J. N. Heater—Not of late years, for even with an experienced person it is attended with much danger.

J. E. Pond—No! except that in winter I use nine Langstroth frames in the space that ten occupy during the honey season.

G. W. Demaree—1. No, not by "a half a mile." 2. If my bees have plenty of stores they breed up as fast as the size of the colony will admit of.

Mrs. L. Harrison—1. Not now; that is one of the things that I used to do. 2. I practiced it until I was convinced that I killed many colonies by so doing.

Wm. M. Barnum—Not as a rule. Under certain conditions it may be advisable. Won't Dr. Tinker or Mr. Demaree give us an article upon this subject soon?

Rev. Emerson T. Abbott—No, sir; the queen will see to spreading the brood as fast as the bees can care for it, if she is given plenty of room so she has a fair chance to do her best.

Chas. Dadant & Son—Only to growing colonies that need increase when warm weather comes. It should be done very carefully for fear of chilling the brood. Let beginners go at it very sparingly.

Mrs. Jennie Atchley—1. Yes. 2. If I have a two-frame nucleus in the spring, and wish to build it up, I spread the frames and slip in empty combs or foundation, one at a time, until the hive is full. Of course the proper time should arrive before spreading.

Binders for this size of the American Bee Journal we can furnish for 75 cents each, postpaid; or we will club it with the Bee Journal for a year—both for $1.60. We have a few of the old size (6x9) Binders left, that we will mail for only 40 cents each, to close them out.

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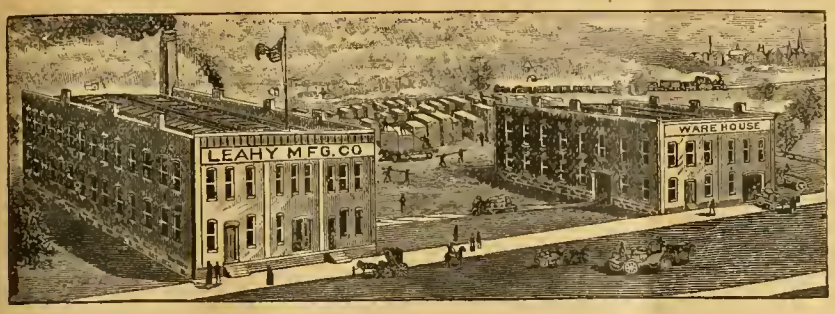

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Heber, Utah, Oct. 9, 1894. J. A. SMITH.

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JENNIE ATCHLEY, Beeville, Bee Co., Tex.

Doctor's Hints

By DR. PEIRO, Chicago, Ill.

Dyspeptic Stomachs Need Rest.

My opinion, based on 30 years constant observation, convinces me that if half the dyspeptics would live on bread and hot milk alone, for one month, and thus give their stomachs a rest, a cure would follow without the aid of medicines.

The Best Tea.

Black tea is the best to use, for those who must have it, because it is not "faced" (colored) with the various matters used—prussian blue and soapstone powder, chiefly.

Animals in the Stomach.

The idea that snakes, lizards and frogs may be swallowed and grow in the stomach is a fabulous supposition. They could not live 24 hours. They would be smothered and killed by the digestive acids.

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35th Year. CHICAGO, ILL., APRIL 4, 1895. No. 14.

Contributed Articles.

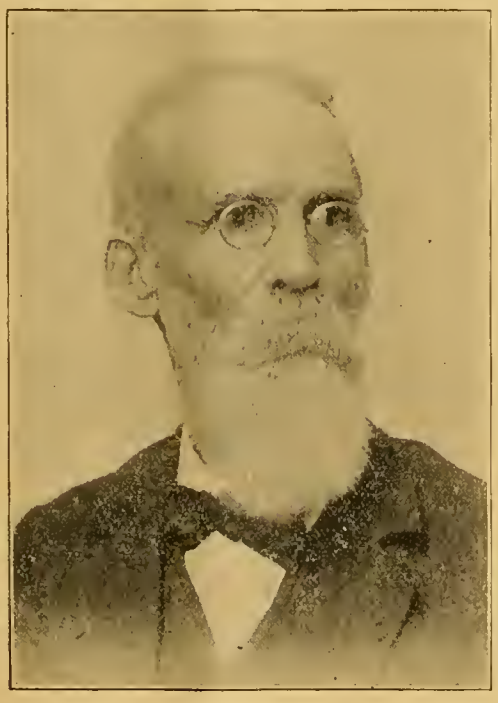
On Important Apiarian Subjects.

Combined Feeder—Its Construction and Use.

BY J. A. GOLDEN.

There has been a great deal said through the bee-papers, during the past year, in regard to the percolator feeder, and while this plan of feeding may have its advocates, I send you a photograph of Flody feeding her bees with one of my combined feeders, which you will see leaning against the front of the hive, and is so constructed as to be used for a brood-frame cover, doing away with the oil-cloth or burlap, and is always ready to feed for winter stores, or stimulating, feeding back extracted honey to finish sections at the closing of the season, or sugar in any form, and the beauty of it all is, one can feed a large number of colonies in a few minutes.

Flody's plan is to lift off the hive cover, raise one end of the cushion, and pour the feed through the wire-cloth that



Mr. J. A. Golden—See page 220.

covers the feeder. No bees can get out, no robbers get in. Push down the cushion, put on the cover, and off to the next. Thus, by looking at the photograph, it will fully explain this combination of feeder and hive-cover.

This (1894) being the second year that I have used them on all of my hives, gives me an experience from which I am persuaded that there is not one bee-keeper in a thousand that would use any other after trying one of these. They are of

Miss Flody Feeding Her Bees.

simple construction, and could be manufactured very cheaply. I find that I can feed twice the amount of feed with this feeder than I can with any other feeder in the same length of time; besides, it is the best winter cover and ventilator I ever saw or used; and for spring stimulating it is very valuable, never having to disturb the cluster, nor causing cold drafts of air to chill the brood. I hope that every bee-keeper in the land will make and try one. I will give the plan of construction: First, the board K is cut to fit the inside measure of the hive, and is of ⅜ lumber, with a ⅜ strip nailed around the under edge for bee-space over the brood-frames. Then cut a ⅜ slot across one end, like at E, 6 inches long, just inside the end board, which is 2½ inches wide and ⅜ thick. The ends are mitered, and nailed near each end of the board K. Side strips to correspond are nailed close to the edge of the board K, and to the end boards; nail from the underside of board K. The edges should be dressed bevel to make the top true. Cut a strip of wire-cloth to fit the top of the inclosure; take strips like the old comb-guide, lay one under and one on top around the edge, and with ¼ inch wire tacks nail and clinch all around, which makes quite a good frame. Then with two small leather hinges attach to one of the end-boards this

frame. The screen is L in the cut. A little board is laid over the bee-entrance when not feeding.

To make the feeder take ¾-inch board as large as desired for the bottom strips, and ¾ inch by 1½ wide. Saw kerfs in each end piece, joint together, and nail the bottom-board to this rim. Apply a coat of cobalt, which is dissolved in alcohol, and it will never leak. Cut some strips of wood separate, and slip in the saw kerfs. See M in the cut. In fact, the photograph explains the entire combination.

After feeding is completed, take out the feeder, close the bee-entrance, fill the enclosure with bits of old carpet, or a small chaff cushion, put on the large cushion and hive-cover, and your bees will never become damp, nor combs moldy.

After the honey-flow, if you have unfinished sections, set the feeder on top of the super, pour in extracted honey, and all your sections will soon be finished up in complete style. I invite all bee-keepers to try one of these feeders.

Reinersville, Ohio.

Early Drones—Essays at Conventions.

BY DR. J. P. H. BROWN.

A correspondent asks how to get early drones. The colonies that are intended for drone-rearing should go into winter quarters with plenty of stores; at least with sufficient to carry them till they can gather abundantly from natural sources in the spring. Usually such colonies, unless unnecessarily tinkered with, have drones flying before those colonies that have to be fed up in the spring. But if there is not a surplus of food on hand in the hive, then it will be necessary to feed, and the feeding must be kept up regularly, until the bees can gather from natural sources. Regularity in this matter is all-important, and the quantity of food given should be proportioned to the amount they can consume, and a *trifle to store in combs for a rainy day.* Poverty affects bees as it does many humans—it "freezes the genial currents of the soul."

A frame or two of nice, clear drone-comb should be placed near the center of the brood-nest to receive the drone-eggs as soon as the bees get ready to care for the larvæ. You may place the comb right in the center of the brood-nest, but you will not find any drone-larvæ there till the colony is in a condition for drones. They do not care a fig how much you desire them, the workers will have their own way. Sometimes it is very difficult for us to understand bee-instincts. "The notions we form of their senses," observes John Hunter, who was one of the most learned of England's apiarists, "must not only be liable to great inaccuracy, but may often be totally inadequate representations of the truth."

Some colonies will rear drones much sooner than others, when all the conditions are apparently the same. The physical vigor of the queen has much to do in this matter. When ova-production of the queen wanes from old age or infirmity, the bees prepare for a successor in advance of the time the old one ceases to lay.

The queen-breeder should never lose sight of the importance of breeding his stock *up.* To *breed up,* requires skill, the greatest care, and "eternal vigilance." Drones only from the best, choicest, and best-working colonies should be selected. While first-class queen-mothers are indispensable, first-class males are equally so.

Drones from laying workers are defective in their procreating powers; so also are the drones from unimpregnated queens, if reared in worker-cells; but, if reared in drone-cells, they have the power of flight, vigor and capacity to fertilize the queen. But in queen-breeding, unfertilized queens cannot be depended upon for drones. All such drones should be carefully discarded. These conclusions have been arrived at by careful experiments and observations that I have conducted with unfecundated queens.

ESSAYS OR NO ESSAYS AT BEE-CONVENTIONS.

The question of essays or no essays at bee-conventions seems to have given rise to some discussion. In every organized convention, society, or association for the advancement of science, there must be some means instituted to draw out thought and to encourage discussion. There are usually two classes of persons who attend these meetings. One is composed of individuals who are gifted with the faculty of language sufficiently large to enable them to readily express their thoughts *extempore.* While the other class have their ideas pent up for the want of ready words to express them. The best thoughts, the most reliable judgment, and the best digested experience, are often found with this latter class. They take back seats, while the "darn-on talkiest" fellows come to the front and monopolize the time, even if they have to "grind out" "cases," "examples" and "instances" "on-sight" to suit the occasion. The essay is the only means they have to make themselves heard.

An essay is supposed to be the embodiment of the thoughts and experience of the writer. Ideas go on the paper criticised and analyzed by the writer according to his faculty of perception. Thought is brought in contact with thought, and discussion is thereby drawn out.

It is to the interest of bee-keepers to organize, encourage and maintain the existence of societies devoted to the promotion of the bee-keeping industry. To say nothing of their social feature, their educational power is great. It has been my good fortune to attend a number of meetings of the North American Bee-Keepers' Association, and I always found that the interchange of thought compensated me for the time and expense incurred in making the journey.

Augusta, Ga.

The California State Convention.

BY JOHN H. MARTIN.

The California State Bee-Keepers' Association met Feb. 5, in Los Angeles. The usual routine business occupied a good share of the morning session.

Mr. Flory, from Lemoore, Kings county, presented his credentials as a delegate from the Central California Bee-Keepers' Association, and was admitted to the rights and privileges of the meeting.

Mr. McIntyre described his fire-proof honey-house. It is 14x22 feet, and cost less than $200. He could store 30 tons of honey, and could hold his honey over, or until he could secure better prices. He had no fears of his building and contents burning, and had no insurance rates to pay.

MARKETING THE HONEY CROP.

Capt. Wood sold the most of his honey in the home markets, and if he could not get his price, held it over until the next year. Dealers would offer 4 cents per pound, but he had always made money by holding it for better prices.

The commission men came in for a share of blame, but as a general thing commission men had come up to their agreements.

Mr. Brods, a dealer from Riverside, said it was not necessary to ship to commission men. He bought large quantities of honey every year, and made an agreement with the producer upon a settled price. Many producers have to sell their honey early; in such cases he advanced money and held the honey for several months, that better prices might be obtained. He keeps posted in relation to all Eastern markets, and all the profits he desired was the usual rate of half a cent per pound. He thought that bee-keepers could get a better price for their honey by allowing only one or two men to handle it.

Several committees were then appointed.

CO-OPERATION AMONG BEE-KEEPERS.

The afternoon session opened with an essay by Mr. Brodbeck, upon "Co-operation of Bee-Keepers." The discussion that followed was of deep interest to bee-keepers.

Mr. Mellen, secretary of the co-operative store in Acton, Calif., spoke of the success attending their organization. Co-operative associations are being formed in various portions of the country, and it is a move in the right direction. A co-operative association comes in contact with all other such organizations, and the more organizations the greater the power. How to co-operate is taught in a 50-cent book written by Herbert Myreck, and sold by W. A. Wayland, Tennessee City, Tenn. At present we are at the mercy of the capitalist, and co-operation is the way out.

Mr. Levering spoke in a discouraging strain in relation to the fact that bee-keepers would not work together, but he hoped that something would be accomplished.

Mr. Brodbeck said that plans were being perfected for the organization of a local association in Los Angeles. There would be a selling agent appointed, and the honey sold by samples. All members of the association would agree to grade their honey and send samples, and also agree to stand by the association.

Mr. Cory said that he had put up honey in small cans, labeled finely, and had obtained satisfactory prices, but after getting a market established the next season resulted in a total failure of the honey-yield, and not having the honey for his former customers, he lost his market for succeeding seasons.

Prof. Cook remarked that the bee-keepers and laboring men should hold together like the great corporations. Have patience and agitate. The fruit-men had organized, and were

getting better prices and new markets were opening up to them. Bee-keepers could do just as well if they would organize. The price of honey is usually put at too low a price at the first sales.

Dr. Millard believed in putting the best man forward, and let him act as selling agent. The one stumbling-block is the need of ready money, and some plan to pay an advance to those producers who are obliged to sell their honey to procure the necessities of living.

Mr. Touchton said that California had to compete with the whole United States and Cuba. He approved of the plan of putting up honey in small packages. Honey is put up by dealers even into half-pound packages. To get best prices, we must put it up in such packages as the public demands. Bee-keepers should put their own brand on their packages, and thus get up a reputation for it.

Mr. Wilder had been East, and after inquiring into the sale of honey, he found that but a very small amount was sold for table use. The greater portion of California extracted honey was used in manufacturing purposes, and it then came in competition with sugar—if the price of honey went above a certain figure, then honey was discarded and sugar took its place. To get better prices, the honey should be put up for table use, and sold direct to the consumer. Maple sugar and maple syrup was always in demand, because it was put up in popular packages. Capt. Wood thought that our honey should be put up in both large and small packages. Our honey could not all be sold for table use, and manufacturers wanted it in large cans.

Prof. Cook had dealt largely in maple products in Michigan, but during the years of failure he would lose his trade unless he supplied his customers from some other locality. This is where the co-operative plan would come in as an aid. In selling their products and packing it in their own association there would be a great saving. The Orange Exchanges saved about 28 cents per box in packing their oranges.

Mr. Flory, delegate from the Central California Association, said that they wanted co-operation. He said that there must something result from the agitation. In central California they had to contend with low prices, high freight rates on less than car lots, and an unjust tare upon all of their packages—upon a crate for comb honey weighing only 4 pounds they were obliged to allow a tare of 7 pounds—a clear steal of 3 pounds.

Upon a motion by Mr. Levering, 15 favored co-operation, and 6 opposed it, and several not voting. The 6 who opposed it had Exchanges of their own, and were able to get good prices by holding their honey over.

BEE-PARALYSIS CONSIDERED.

This was the next subject under consideration. Mr. Cory's remedy was a pinched queen's head. He also gave fresh brood, and distributed the brood from the affected hive into other colonies, and he saw no more of the disease. He had observed only four cases in his apiaries in 20 years.

Mr. McIntyre had only a few cases, and attributed it to shaded hives and moisture. The brood was chilled slightly, and weakened, resulting in trembling and death.

Mr. Mendleson had an apiary in a shady, moist place, and his colonies were more or less affected with the disease. He practiced Mr. Cory's plan, and cured his colonies.

Mr. Hambaugh did not agree with Mr. McIntyre in relation to dampness. Bee-paralysis, with him, was as troublesome in dry localities as in wet.

Capt. Wood never had a case of bee-paralysis in a hive of black bees. He believed these high-bred, fancy bees were the ones that suffered.

Mr. Flory had experience with the disease in the dry and hot country of central California, and had cured the stricken colony with sulphur.

Mr. McIntyre said that a great many would breed queens until they degenerated. It is easy to tell a queen-cell that will produce a poor queen. Cut a cell in two, and the pupa of a poor queen will have but little royal jelly, and it will have the bluish appearance of skimmilk by the side of a healthy one.

Mr. Touchton exhibited a two-story Langstroth hive fitted for extracting, and gave a lecture describing his method of management. He did not use excluders or bee-escapes. He showed the right and wrong way to shake bees from a comb—a short, sudden jerk was the most effective way. After the lecture, considerable friendly criticism was indulged in. His air-space in the cover was pronounced as impractical, but as an offset it was a remedy against the melting down of combs in the hot season. A large number of bee-keepers now discard quilts altogether, and use a flat cover.

At the close of the afternoon session, Mr. W. R. Arnold invited the bee-keepers to take dinner with him, and there was a royal gathering in the "Royal Restaurant." A vote of thanks was afterward given to Mr. Arnold for his generous treatment.

The evening session was well attended, and

Prof. Cook's Annual Address

was listened to with close attention, as follows:

Ladies and Gentlemen:—Last year I addressed you as one new to this region and its resources; and presented California apiculture as it appeared to my unprejudiced eyes. I am yet young among you, but I have now some observation and some knowledge of my own; and though my outlook has been upon one of the most discouraging seasons ever known to our region, yet I am more sanguine regarding the grand future of the bee-keeping industry of California, than I was one year ago. From a careful investigation of the records, I believe we can count on a honey harvest of unrivaled proportions for at least three years out of five; that we can safely reckon on a good profit two years out of three, and if our management be wise, we need never be under the necessity of feeding our bees. If the past year is a criterion, our bees can fly every month of the year, and gather honey even in the months of November, December, January, and February. Thus the problem of safe wintering is solved for us by our marvelous climate. Warm sunshine and nectar-ladened bloom come with as much salubrity to the bees as to the people, and will prove—are proving—of signal service in giving to our favored region a reputation that must soon crowd our beautiful valleys with the best citizens of our country. Certainly, if we except Florida, no part of our country offers so much to entice the ambitious bee-keeper, as does our own sunny Southland of the Golden State.

I believe I have proved the past year, that bees are a *sine qua non* to successful fruit-culture; Southern California is ever to be the pomologist's paradise. As soon, then, as our pomologists know the real truth, they will court the presence of the apiarist. Already I find the fruit-growers ready to acknowledge that bees are a requisite to their best success. Thus California, more than any other State in our country needs, and must have, the bees. This fact will give added glory to our pursuit.

FOUL BROOD AND BEE-PARALYSIS.

The only two drawbacks to positive success on the part of the cautious and intelligent apiarist, as it seems to me, are the two diseases, "foul brood" and "bee-paralysis." These are no worse in California than elsewhere, and, as I believe, we have intelligence among our bee-keepers that is unsurpassed in any region of the world, we need feel no serious alarm or apprehension because of these diseases. Disease finds its greatest foes in culture and intelligence, and so these two microbe maladies must suffer a fitful and precarious existence among us.

The third disease—"new bee-disease"—that invaded our apiaries last season, destroying the brood, if it were not caused by insufficient honey to feed the brood, readily succumbed to feeding, and so need give us no uneasiness. We may then, brother bee-keepers, heartily felicitate each other in our location, no less than in our business.

We are also to be congratulated in the fact that we may know in advance what our prospects for the season are, and so plan that our cloth and garment shall harmonize. The present winter of abundant rains, insures a crop this coming season. We know that we shall have the nectar-secreting bloom, so that our supers will fairly bulge with the rich harvest of delicious honey. In the East, no one can prejudge the season, and so every bee-keeper must provide a full equipment of supplies, which he may not need for one, two, and in rare cases for even three years. Last winter we knew from the scaot rainfall that no harvest was to be gathered. We therefore lessened our embarrassment by curtailing expenses, and reduced our loss to the minimum. We rejoice, then, that we are in the region of largest harvests, of fewest failures, and where failures give long notice of intended visits.

But there is one serious obstacle, but I hope not an irremedial one, to the best success in California apiculture. The profits are so large, the required attention so slight, the necessary capital and risks so insignificant, that many people with little knowledge and no enthusiasm, secure bees, locate them in some region of sage or other bloom, and give them no attention, except for a brief season just in the time of the honey harvest. In many cases, as I positively know, the bees are not even visited for months, and in case of a drouth like that of last season, over a year passes by without a single

examination being made. Of course such neglect breeds danger. Foul brood may run riot, as it frequently does, and so the entire bee-industry of the regions become imperiled. Is this right or just? Is not any bee-keeper rightly denominated a nuisance who gives his bees no care or attention except for a few days each season? I know of apiaries rotten with foul brood that were left with no care or examination all last season—just the season for robbing and the spread of the malady. One owner sent a person of no bee-knowledge or experience to equalize stores in the autumn. Combs nearly empty of honey were removed and set down outside the hive. I examined some of these combs, and found them reeking with foul brood. A most desirable reformation, then, in our California apiculture, as I believe, is that those unqualified and indifferent bee-keepers be weeded out of the brotherhood, and that every apiary shall have a bee-master, as they call them in Europe, who shall be constantly in communication with his myriad of servants. Doubtless this is beyond the pale of legislation, but I sincerely wish that we had some law, moral or civil, that would require every apiarist to live at or near his bee-yard, and that he should give to his bees such frequent attention that freedom from disease would be insured, and the apiary prevented from becoming a seed-bed for developing and distributing fungoid maladies. Is it possible under the present "Foul Brood Act" to effect something in this direction?

The "New Bee-Disease."—The malady which appeared among us last season, which affects the brood certainly, and the mature bees possibly, surely succumbs at once to feeding. From my observation I was led to ascribe this disease to lack of food. I thought it starvation. I found it only in colonies with almost no honey. It disappeared at once, upon feeding. I fed honey medicated in several ways, but found that honey alone or sugar syrup were just as effective to banish the malady. That bees with very little honey should neglect, perforce, to properly feed the brood, so that the latter should die from starvation, seems not improbable. That the imago bees might die prematurely because they were insufficiently fed, while in the inchoate state, is likewise a reasonable supposition. Enough food might be given them to develop maturity, though not enough to insure health and strength, We know that bees, when there is no nectar afield, work with less of vigor. And so might it not be barely possible, in rare cases, even though the bees had honey, they would feed so sparingly and with such lack of courage and ambition, that the same result would occur? I saw no such case, but think such an event might possibly occur, as the result of long-enforced idleness in the hive.

Unfortunately the editor of one of the bee-papers referred to my article on the "new bee-disease" as pertaining to "bee-paralysis." And so, many writers have attempted to set me right. Of course, any intelligent reading of my first article would have set these writers *right*. "Bee-paralysis" shows its terrors in the mortality of the old bees. This new bee-disease is most apparent, if not exclusively manifest, in the larvæ or brood. In some few hives which I observed, there were also numerous dead bees in front of the entrance, such as are observed in "bee-paralysis." I wondered then—I wonder still—if these bees did not die of the effects of stinted nourishment, while developing in the brood-cells. I feel very certain that this "new bee-disease" is no menace to our future prosperity as bee-keepers. Henceforth we will leave enough honey in each hive, every Autumn, to bridge over seasons of drought and no nectar secretion. If we are thus wise I have no fear of a reappearance of the "new bee-disease."

Honey Eucalyptus.—I was pleased in November and December to find that the bees were collecting considerable honey. This has gone on even to date. Upon examination, I find that the source of this honey is *Eucalyptus longifolia*. This tree is much clearer than the common blue gum, *Eucalyptus globulus*; is beautiful in foliage and form, and has a smooth bark, and from its showy blossoms which last all winter, is an exceedingly desirable tree for roadside planting. But it is also a very fine honey-plant. I am sure that we may all wisely urge the planting of this eucalyptus. It may well become the "California linden." Aside from its quality as a honey-tree, it is also one of the most desirable of the gum-trees, because of its grace and beauty.

I have also heard that another species of gum, which blossoms in June and July, is a serious apecide. If any present know ought of this species, I shall be glad to hear from thom.

Pollination.—As I have given already three addresses on this important topic, all of which have been published, I will give you only a brief summary of the results of the investigations. I proved by covering the blossoms with paper bags, that Bartlett pears, Kelsey and another variety of plum, and unknown variety of cherry are all entirely sterile to their own pollen, or pollen from the same variety although from another tree; that olives and lemons are only partially fruitful unless cross-pollinated; while to my surprise, navel oranges and royal apricots were entirely responsive to self-pollination. Thus we see that successful pomology must have the honey-bees. Failure must attend the cultivation of many of our most valued fruits, unless cross-pollination is secured. While other insects than bees may aid in such cross-pollination, yet the honey-bee is absolutely essential to the highest success, as it alone can be counted on in every season and alway. If bees are close at hand they are a sure dependence. The highest success in pomology demands the mixing of varieties, and the near presence of bees. How well is the eternal fitness of things exemplified in the fact that this region is like the paradise of the bee-keeper and the pomologist. It is to be a great center of honey-production, and will show one of the greatest orchards of the world. And the beneficent work of reciprocity will be demonstrated in that each of these important industries is to confer a gracious blessing on the other.

Bees and Fruit-Drying.—In my talks at the meetings of fruit-growers, I always receive respectful attention, and no one calls the conclusions in question. In most cases, however, I am asked if there is no remedy for the evil of the attack of bees upon drying fruit. I answer that if such bees were exclusively from colonies owned by bee-keepers, the owners could be requested to move them away, during the comparatively brief season of fruit-drying. For one, I should not hesitate to do this without being asked. Peace and good-will among neighbors is worth too much to be jeopardized, when so little effort would remove the annoyance. But so many unowned bees find homes in the walls of buildings, that very likely such action would not greatly mitigate the disturbance. Can we then suggest covers for the fruit-trays, that will secure against attack and all annoyance? If, as some assert, cheap covers of cheese-cloth will more than pay in hastening the evaporation, then surely such covers should be provided.

Legislation.—A year ago a committee on Legislation was appointed, but, like Othello, such committee was occupationless, as there has been no legislature in session, and congress has been utterly oblivious to such needs of the people. The legislature is now in session, and action is opportune. The spirit of reform which seems alive in the legislature, and which we may all devoutly hope is not all talk, casts doubt on our ability to secure any appropriation. Indeed, I am not sure that we are wise in requesting any such action.

Every bee-keeper should take the American Bee Journal—our only weekly publication. And all that is valuable in our proceedings should appear in its columns. This adds to the value of the Bee Journal, saves expense, and gives us a large audience. What other need have we for public money? Are not taxes already quite too high? Should we do ought to increase burdens of the great public?

Act To Prevent Adulteration.—But we do need a good, strong adulteration law. This will cost no money, is needed by other industries, and is loudly called for by the public health. This law should be of easy enforcement, and should make it a very grievous offense to sell any article for what it is not correctly labeled. Butter should mean butter, maple syrup nothing else, and honey should be the product of the bees. It is not only right for us to ask for such an act, but all the people should unite in demanding it, and then see that it is enforced. What action shall we take to secure legislation that will banish this horrid work of fraud and deception that is robbing us of both money and health?

The excellent prospect of a great honey harvest the coming season, must bring to all of us joy and cheer. I hope that this spirit may not only give tone to our meeting, but will follow us all to our homes, and bless us exceedingly throughout the entire year.

Claremont, Calif, Jan. 20. A. J. Cook.

The various points alluded to by Pres. Cook were then discussed. The new bee-disease, so-called, Mr. Levering thought was not due to starvation—it was something in the nature of la grippe, not local, but general in its effects.

Upon the subject of bees and fruit-drying, Mr. Mendleson said that he had paid $125 damages in one case, and $10 in another, where his bees destroyed drying fruit.

The question as to who should move, the bee-keeper or the fruit man, Mr. Touchton thought, inasmuch as the fruit-producer was indebted to the bee for his fruit crop that he ought to move.

In relation to city ordinances referred to, Mr. Woodbury said that ordinances against producers selling their own fruits, honey, etc., are unconstitutional, and cannot be enforced.

An essay on "California Bee-Keeping," was read by the Secretary.

At the Wednesday morning session Mr. A. B. Mellen presented an interesting essay upon the subject of "Honey *vs.* Money." This called forth some discussion in the line of co-operation.

Mr. Mendleson then favored the association with his essay upon the "The Use and Abuse of Smoke in the Management of Bees." Little smoke, gentle handling, clean hives, were the texts followed. Rough and rapid work with bees, and much smoke always resulted in cross bees. Mr. Taylor had bees so cross that they could not be cured with any of the foregoing methods, Prof. Cook said. He could manage cross bees the best under a tent.

At this stage of the meeting Dr. Gallup, of Santa Ana, arrived, and was given a warm welcome by the bee-keepers. He was made an honorary member. Hon. Mr. Hambaugh, of Illinois, and Mr. Alphaugh, of Canada, were also in attendance, and were made honorary members of the association.

FEEDING BEES.

The subject of feeding bees received a general discussion. Mr. McIntyre could usually tell when a colony needed feeding by observing if there were young, immature bees in front of the hive. He fed mostly in jars inverted on the hive. To prevent robbing, put a robber trap in front of the hive. After a large number of robbers had been confined for several hours, they were glad to get home and stay there. Dry years were the most profitable to him, for he not only obtained a good price for his previous year's honey, but kept his bees in such condition that when the good year did come he obtained a large yield.

Mr. Cory, after 20 years' experience in feeding, was more successful when he fed diluted honey. He had fed several hundred pounds to a single colony in order to get reserve combs for future use.

Capt. Wood fed by pouring honey on a barley sack laid over the frames, and found it a good way.

Dr. Gallup thought bees would get daubed, but if the honey or feed was diluted there would be no danger to the bees, if fed in warm weather.

Mr. Alpaugh said that if they fed honey in Canada it would granulate in the comb, unless it was mixed with syrup, or if the honey was scalded it would not granulate.

Mr. McIntyre said that sage honey will not granulate in three or four years—that is the difference between Canada and California honey.

Capt. Wood exhibited an old weather-beaten hive, and his method of management. He preferred an old-style Root Simplicity smoker, but improved by Wood. His honey-knife was also made with considerable metal in it, in order to hold heat. He kept the knife hot while uncapping, by inserting it in a peculiarly constructed copper boiler. He also used a very ingenious scraper, something like an intensified putty-knife.

The majority of the bee-keepers present preferred the Langstroth hive and the Bingham knife.

The question-box was opened, and the question, "What is the general average production of honey in California?" was read. Mr. McIntyre said that apiaries under good management would average 75 pounds per colony.

At the afternoon session the association proceeded to the election of officers. Prof. Cook was the unanimous choice for re-election for President, John H. Martin was re-elected Secretary, and H. E. Wilder was elected Treasurer; Dr. Millard and M. H. Mendleson as Executive Committee. Geo. W. Brodbeck, Vice-President for Los Angeles county; J. F. Flory, for Kings; B. S. Taylor, for Riverside; J. A. McKinney, for San Bernardino; R. Touchton, for Ventura; Dr. E. Gallup, for Orange; and G. S. Stubblefield, for San Diego county.

The reports of committees were then received. The Secretary was voted $25 for his services. Mr. Levering presented an appeal to the association, asking that bee-keepers put the product of one colony of bees during the coming season for the benefit of Rev. L. L. Langstroth, and to be applied to the "Langstroth Fund." Upon motion of Mr. Cory, it was resolved to send $10 of the money in the hands of the Treasurer to Mr. Langstroth. A collection was afterwards taken, and $6.60 additional was raised.

Dr. Gallup was then called upon, and made a few remarks upon his early experiences in bee-keeping in the cold climate of Canada. He did not keep bees at present, but was always interested in them. He said he had gotten himself into trouble by writing for the American Bee Journal, and was flooded with letters asking all sorts of questions about California.

Upon motion of Mr. Brodbeck, it was resolved that the California State Bee-Keepers' Association recognize the Central California Bee-Keepers' Association as co-workers with us, and their action in sending such an able representative as Mr. Flory was commended.

The convention then adjourned to meet in Los Angeles at the call of the Executive Committee.

Bloomington, Calif. J. H. MARTIN, *Sec.*

Managing the Hoffman Frames.

BY C. M. RIVERS.

I wonder if Shakespeare had in mind the difficulties of adjusting a Hoffman frame in a crowded hive when he wrote—"If it were done when 'tis done, then 'twere well it were done quickly;" or the bees' chances of life under such circumstances when he makes Hamlet say, "To be or not to be." I hear your answer, "That is the question."

That considerable pulling and prying is necessary in getting the Hoffman frames apart, and that some care and patience is required if we would avoid killing bees in readjusting them, may be admitted for the purpose of this article.

A handy tool as suggested by some bee-keepers for this work, is the pocket-knife. Some say a nail is a fine thing, and may be carried in the pencil-pocket. A screw-driver, and under some circumstances a small crow-bar, have been recommended. Now, without entering into a discussion of the comparative merits of these different implements, there is one by the use of which we may avoid the killing of bees in crowding the frames together, and with much less trouble than smoking them out of the way. I refer to the screw-driver, but any piece of iron not too thick, and of sufficient length, will answer the purpose.

The frame to be adjusted in the hive is so placed that the end-bars of the frames are about ¾ inch apart. The point of the screw-driver is now placed between the end bars near the top, and allowed to pass down between the two below the offset in the frames. When this is properly done, this crowds all bees from between the end-bars. The frame may now be pushed up against the blade of the screw-driver, the screw-driver withdrawn and finally the frames crowded snugly together. Seattle, Wash.

Amount of Honey Consumed in Producing a Pound of Bees.

BY S. A. SCHUDDEMAGEN.

How much honey is consumed in producing a given number or amount, say one pound, of bees?—Question in the American Bee Journal of Feb. 8, 1894.

This is a very difficult question to answer, as it may vary at different seasons, and is a good deal guess-work, as the amount of honey and pollen consumed to rear one pound of bees will probably never be accurately ascertained. It has been assumed, and stated, that one colony needs 60 pounds of honey in one year for its maintenance; but for this latitude in a good season it is my opinion that this is not half enough.

If we introduce an Italian queen in a black colony, we find that the black bees have entirely disappeared in about two months and one week in the working season; deducting 21 days from the egg to the time until the bee hatches, leaves about 45 days for the life of the bee; but here we must take into account the fact that only a favored few reach that age, as the majority are swept away by the wind and accidents while at work, in or before the prime of their life.

In animal life, especially in mammals, it takes about from 7 to 10 pounds of milk to make one pound gain in weight: as chyle—the food with which the nurse-bees feed the larvæ—is probably richer than milk, containing more albuminoids and nitrogen, it may take less. All insects, in their larval state are voracious eaters, and the larva of the bee will probably consume more than treble its own weight during the seven days it is fed, as much is lost by exhalation, and I believe that the hatched young bee weighs less than the larva when it is capped over, as the fluids in the body of the larva are absorbed and transformed in the tissues of the bee. To this must be added the honey needed by the bees until they are old enough to gather for themselves—about 16 days.

In two experiments with hiving prime swarms on empty combs, in a honey-flow, the gain of storing in the first 5 days until larvæ was fed, against other colonies having brood, and their gain when they had larvæ to feed and themselves, indicates a loss of 2½ to 3 pounds a day.

So I conclude that every pound of bees, when hatched, have cost the colony and the bee-keeper at least two pounds of honey, and probably 3, until the bees are old enough to gather;

taking into consideration that the average life of the bee is probably not more than 35 days, and the enormous amount of brood (many of mine had 12 to 14 Langstroth frames for 6 weeks), we can see how much honey it takes before we can take any surplus.

If this article leads others who have more time than I had, to investigate, it may throw some light on overstocking.

Sabinal, Tex.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Keeping Bees in a Garret.

What is the best method to keep bees in a garret? It is above the second story, has three large windows at the west side, and three not quite so large on the east side. Oldenburg is only a little country town, but on account of putting up a new building, I will be compelled to remove the bees (4 colonies) to the garret until next fall, at least; then I will have a fine place for them. How will I manage to return swarms to the hive from which they issue? I do not want to increase, and I cannot prevent swarming, as Mr. Muth does, because I cannot extract, or rather I do not want anything except comb honey. Will they need any different management than if out-of-doors, or in a house-apiary? B. S.

Oldenburg, Ind.

ANSWER.—I don't think you will need to manage differently in a garret from what you would on the ground, at least in most respects. See to it that the bees cannot get out into the garret, for if they do they do they'll fly to the windows and buzz away on the glass till they die. Let the only passage from the hive be one that opens outside. As to returning swarms, it will be just as easy to return a swarm in the garret as on the ground, except for the extra labor of carrying the swarm up the stairs. Take the swarm in a box, bag or basket, and the bees will stay together while you carry them up-stairs. You may have to return a swarm to the hive several times, but if you persist in returning it until all the young queens but one are killed, you will be master of the situation.

I'll tell you a way that I learned from Doolittle that may suit your case. When the bees swarm, cage the queen and leave her in the hive. In five days cut out all queen-cells, at least all sealed cells. In five days more cut out cells again and free the queen. Then there will be no more swarming. I think it would be a good plan to have an Alley queen-trap at the entrance, for then a swarm would not come out and go off without your knowing anything about it.

Use Leaves Instead of Chaff.

In the absence of wheat or oat chaff for packing the chaff hive, is there anything that will do equally well? I cannot get either kind of chaff here without a great deal of trouble.

Holyoke, Mass. J. H. B.

ANSWER.—Gather clean leaves of trees, using them when perfectly dry, and they'll answer a very good purpose.

Wants Honey and Not Swarms.

I have 10 colonies of bees in Langstroth hives. The past two seasons I have not gotten any honey. The bees seem to be working all the time in the season and swarming. I put the sections on with starters, but can get no honey—what I want is comb honey. Is their any way I can stop their swarming, and have them store a little honey? They are on the summer stands packed in sawdust, and are all alive.

I have two colonies in the cellar in box-hives. What would you do with them? I am located in a valley between two mountains, in what I should think is a good bee-field.

Ticonderoga, N. Y. J. C.

ANSWER.—So many things are to be taken into consideration that without knowing all the particulars it's hard to know what to advise. If a colony is gathering enough so it swarms, and the swarms gather enough to winter on, it certainly seems that they are gathering enough to store surplus if they are so minded. One way might be to put back all swarms as fast as they issue, then the stores that would be used to fill up the swarms would at least partly go into the surplus boxes. From the way you speak, it is quite possible that you don't put on supers till the bees begin to think of swarming, then more than one swarm is sent out from each colony, leaving the mother colony too weak to store any surplus, and the swarms have all they can do to fill up for winter.

Suppose you try this plan the coming season: Put on supers a little before the full flow begins; if white clover is your crop, put them on about as soon as white clover begins to bloom. Then when the first swarm comes out hive it on the old stand, putting the mother hive within a foot or two on one side. In about five days move the old hive away entirely, setting it a rod or two from the old stand, and that will greatly strengthen the new swarm, and if the season is good it will be strange if the new swarm will not store some honey for you. You ought to have a good bee-book, such as this journal is now offering. (See page 219.—EDITOR.)

Sowing Alfalfa Clover Seed.

I have 7 colonies in good condition. They have had two good cleansing flights since December. I pack my bees in straw to winter them. It is so cold here yet that bees have not gathered any pollen yet. I would like to sow some alfalfa this spring. Would it be safe to sow before the frost is out of the ground? W. L. R.

Pioneer, Ohio, March 20.

ANSWER.—I know of no reason why it may not be sown as early as any of the clovers, but if any one knows to the contrary, let him rise and speak.

That "Deep" Plan for Wintering.

I suppose I may put in "Questions and Answers" a reply to the question of Mrs. Durbin, on page 179. Why, Mrs. Durbin, are you not satisfied with the reply, or rather the question, of your husband? And yet there's no law against a woman thinking up some improvement, even if she's not a veteran. I'm not at all sure that the plan you mention may not be worth a trial. Years ago it was talked of, and perhaps to some extent practiced—to stand a Langstroth hive on end for wintering—and your plan would be somewhat in the same line. I should prefer to have the four frames in the upper hive filled solid full of honey. C. C. M.

When Alsike Clover Blooms.

It was the driest season here last summer we have had for years. I have 31 colonies of bees, and I did not get any honey. I want to know whether Alsike clover blooms in the fall like red clover? C. W. T.

Williamstown, Ky.

ANSWER.—Almost everything that applies to red clover applies to Alsike. It blossoms the second and third years. Comes in bloom a little ahead of white clover, and, if cut or pastured just before coming into bloom it will bloom after white clover.

What to Do With Weak Colonies in Spring.

I have 21 colonies of bees in the cellar, but some are very weak, and I am afraid queenless, as owing to last year being such a poor year for honey, all the stores my bees had for winter was what I fed them. What I want to know is this: When I take them out this spring, will it do to put a light colony on the top of some other, and let them unite—that is, if it is queenless? Or can you give me some better way of saving these small colonies, so that they will be in condition for the harvest? L. S.

Aurora, Ill.

ANSWER.—I used to take a great deal of pains to try to nurse up these little weaklings that come out half dead and alive with very few bees in them, and sometimes I'd give them brood from a strong colony to help bring them up. The idea was that if there was one very strong colony and one very weak one, if I let them alone the weak one would die, and then I'd have only one colony, but if I gave the weak one

brood from the strong colony, then both would live and I'd have two colonies. But giving brood from the strong didn't strengthen the weak one as much as it weakened the strong one. Then I tried uniting the weaklings, but somehow four or five of them together seemed in a little while to just as weak as if they had been left separate. So I finally settled down to the very thing you propose, to unite a weakling with a good colony, for the good colony would thus gain a little in strength, and even if it didn't no harm would be done, for the weakling was good for nothing any way. When they first begin to fly they'll unite without any difficulty.

Origin and Use of Royal Jelly.

What is royal jelly made of? Is it made by the bees or man? If by man, how would I begin to secure it, as I want to rear some queens. I read that a certain man had his bees to construct a number of queen-cells in the dead of winter—not for queens, but for the sake of the royal jelly. I want some information about this, as I would like to know how it is produced. J. M. J.

Pike, Tex.

ANSWER.—Royal jelly is honey and pollen digested by the nurse-bees and fed to the larvæ intended to be queens. It is supposed to be the same as is fed to all larvæ during the first three days of their existence. It probably cannot be manufactured by man, but you can get it in queen-cells by making bees queenless. When bees prepare for swarming, they rear a number of young queens, each one being lavishly supplied with royal jelly beyond their ability to consume it.

The Sunny Southland.

CONDUCTED BY

MRS. JENNIE ATCHLEY, BEEVILLE, TEX.

From the North to the South.

Henry Guth, of South Dakota, spent a few days with us lately. He is favorably impressed with Bee county for honey-production.

H. L. Carrington, of Missouri, has landed in Bee county with a carload of bees, and is well pleased with his move.

M. Ramsay, of Ontario, Canada, recently made us a visit. He has 100 colonies in a cellar at home, and thinks of moving here, as he also is favorably impressed with this country.

Mr. and Mrs. T. J. Adams, of Nebraska, have landed with their bees and effects, and are now locating their apiary west of Beeville. They tried Brazoria county one or two years, and found it too wet, and the honey too dark to be profitable there.

There is room for hundreds of bee-keepers in southwest Texas. JENNIE ATCHLEY.

Why Wouldn't the Bees Work in Supers? Etc.

JENNIE ATCHLEY:—Please tell me why my bees would not work in the supers last season. I put two-inch starters in all the sections, but the bees failed to work in them for some cause. When I saw they would not work in the sections, I then filled some of the sections with comb and honey, and some empty comb; they would fill the empty comb, but would not draw out the foundation. I placed the supers on good, strong colonies, mostly young swarms.

I have a good grade of bees, and they work well in hives with frames. I am using the dovetailed 8-frame hive. I have 47 colonies, and I am comparatively a beginner. I lost 3 colonies during the freeze—they froze with plenty of honey in the hives. What time shall I feed to have good strong colonies for the honey-flow? Will granulated sugar be better than honey? My bees have plenty of honey in the hives.

Arlington, Tex. Z. W. GRAY.

Friend Gray, it will be hard for me to tell why your bees did not store in the sections, but I suspect they were not getting honey sufficient to force them up into the boxes, or else they were not strong enough. Try full-sized sheets in sections next time, and if you can get it place a bait section with honey already in it in the center of each super, and if your bees are gathering much honey, and are strong in bees, I think you will find that they will store in the sections with foundation. The combs and honey you gave them served as baits, is why they went to work in the boxes filled with comb.

You are not alone in losing bees by that unusual freeze, as thousands of colonies froze to death.

I would feed through May at your place, to get good, strong colonies for the June flow. If I knew which way you live from Arlington, I could better answer you, as I am well acquainted with all your county, having lived at Arlington 15 years ago. If you live out on the black land toward Grand Prairie, get your bees good and strong for horse-mint in June. If you live towards the river, or near Mr. Swan's place, you will get some honey earlier than June, if it is not too dry. If you are out towards Mountain Creek, you will get a crop in June and July. If you are towards the Arkansas lane, or Johnson Station, don't fail to get your bees ready for the June flow. If you live in Arlington, or towards Handley, you will get some ratan and grapevine honey in May. If I were you I would watch my honey-resources closely, and always feed up in time to have the bees good and strong by at least a week ahead of your harvest, and you will catch a crop.

Any further information that I am able to give, I will gladly do so through the American Bee Journal.

A Case of Little Wild Bees.

I enclose four little bees or insects that I very much fear are a destructive enemy to our bees. Soon after the late freeze I noticed a great many dead bees in front of a hive, and I cleared them away as is my custom. In a few days, while passing the same hive, I noticed a great many bees crawling around the front of the hive with the abdomens distended, or very much swollen, and shaking their wings very similar to your description of bee-paralysis. I find these little insects in the hives and boring into the middle of the combs, and a good many in front of the hives among the dead bees. Can it be possible that this insect is the cause of the paralysis, and has not been discovered? I am inclined to think this a genuine case of paralysis. Whether the insects have anything to do with it or not I cannot say, though, as I have never seen any of it I have never given any attention to any of those diseases, as I thought Texas was proof against bee-diseases. I feel very much alarmed at this, for it has destroyed a strong colony in a few days. Please advise met at once what to do. I will isolate them from my apiary.

Fairview, Tex. G. F. DAVIDSON.

Friend D., I sent your letter and insects to Prof. Cook, who reports as follows on them:

The insects sent by Mr. Davidson are small wild bees, of the genus Angochlora. They are so crushed that it would be impossible to determine the species. They are a beautiful metallic green, as are all of the genus. They were in the hive as pilferers, after the honey. I presume the bees are suffering from paralysis, and so are weak and just in condition to be victimized by even these tiny wild bees. As weak colonies are likely to be infested by the bee-moth or robbers, so are diseased colonies more likely to be victims of such thieves as the Andrena, Angochlora, etc.

I have often noticed wild bees robbing from our hive-bees, and have noticed many such cases through the bee-papers. I doubt if such attack ever results in much harm. The robbers are not numerous enough. A. J. COOK.

Claremont, Calif.

A B C of Bee-Culture.—This is the fine cyclopedia of bee-keeping by A. I. Root, containing 400 pages and nearly 200 engravings. The regular price is $1.25, postpaid, but until April 20 we make the following very liberal clubbing offers on this book: The American Bee Journal one year and the "A B C" bound in cloth—both for only $1.80; or the parchment cover (very heavy paper) "A B C" and the American Bee Journal one year—both together only $1.50. Remember, April 20 is the limit on these offers. Better order at once if you want a copy of this excellent bee-book.

Back Numbers for 1895 we can furnish to new subscribers until further notice, if they will let us know when subscribing. We will begin the subscription Jan. 1, 1895, if you say so when sending $1.00 for a year's subscription

The American Bee Journal
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GEORGE W. YORK,
EDITOR.
Assisted by the following Department Editors:

Dr. C. C. Miller	"Questions and Answers."
Mrs. Jennie Atchley	"The Sunny Southland."
"Gleaner"	"Among the Bee-Papers."
"Bee-Master"	"Canadian Beedom."
Dr. F. L. Peiro	"Doctor's Hints."
Rev. Emerson T. Abbott	"Notes and Comments."

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Editorial Budget.

California Bee-Keepers, as well as all others, will be interested in reading the report of the last California State convention, published this week. Pres. Cook's address is specially good.

Mr. Alfred H. Newman, formerly of the firm of Thomas G. Newman & Son, who published the American Bee Journal, spent an hour in this office on Tuesday of last week. Mr. Newman is now the manager of the Cedar Rapids Candy Company, of Iowa—a successful as well as sweet concern.

Dr. Adolphus de Planta, an eminent European scientist, died recently in Switzerland, at the age of 75 years. The British Bee Journal, in speaking of him, says: "There is hardly another man who has given so much time to scientific investigations for the benefit of bee-keepers as Dr. de Planta." His death is a great loss to the bee-keeping world. Shortly, the American Bee Journal expects to give a portrait and sketch of this famous bee-investigator, with something about his work.

Mr. M. M. Baldridge, of St. Charles, Ill., gave the Bee Journal office a pleasant call last week. He is preparing a complete and accurate history of the importation of Italian bees into the United States, which will appear in a series of four article in these columns soon. They will be interesting, I can assure you.

Mr. M. has issued two "Special Bulletins" on "White Melilot Clover," which every bee-keeper and farmer should read. He will mail the two for four cents in stamps.

That Chicago Convention.——Regarding the forming of another Northwestern, Dr. Miller has this to say:

As you want opinions about having a convention at Chicago, Mr. Editor, I'll give mine. Generally a good convention can be held at Chicago, and yet I doubt if two could be successfully held there each year, no matter what might be the name. Better have one good one than two not quite so good.

As to name, it hardly seems to me that ought to cut any figure. If it goes under the name of "Illinois State," I think that would be a help to the State society, and the same persons meeting there would have the same convention as if it were called "Northwestern." Would a Wisconsin man object to coming to it with a different name? After you get expressions from others, if it's found that there is any feeling about the name, and if bee-keepers from other States would come to a Northwestern convention that would not come to a State convention, then by all means let the Northwestern be revived.

In any case, the one important thing to look out for is to have the meeting at a time when low railroad rates will be *sure* beyond the shadow of a doubt. Perhaps the time of the Fat Stock Show will be the best time.

I'm glad you called for expressions, and hope the brethren will not be "backward about coming forward."

C. C. Miller.

What about the "sister-en" "coming forward?" But probably Dr. M. agrees with the minister who thought it quite proper that "the bretheren" should *embrace* the sisters!

Prompt Renewing of subscriptions to any journal is a habit worth cultivating—a good thing for the subscribers and also for the periodical. Here's what Mr. Edward W. Bok—the able editor of the popular Ladies' Home Journal—has to to say about this matter:

"A magazine's success is aided or retarded just in proportion to the promptness employed by its readers in renewing their subscriptions. Delayed renewals cripple the best efforts of any magazine."

The same thing applies to the American Bee Journal. Just memorize Mr. Bok's truthful sentences, and then vow that your lack of promptness in renewing will never hinder the success of any newspaper or magazine you have subscribed for.

Mr. J. A. Golden.

The biographical sketch of Mr. J. A. Golden (portrait on first page) which follows, is taken from Wilson's Photographic Magazine, of New York, for 1894:

An interesting example of a class of photographers fast disappearing is shown in a few notes concerning a veteran portrait worker—Mr. J. A. Golden, of Reinersville, Ohio, which have come into our hands. In 1863, Mr. Golden, then engaged in the business of harness-making, first experienced the delights of photography, by sitting for an ambrotype portrait, patronizing an itinerant photographer for that purpose. The ambrotypist (evidently less jealously secretive than many of his craft) invited his sitter into the dark room to witness the development of the picture. The wonderful and fascinating operation so impressed Mr. Golden (whose leisure hours had for years been spent in picture-making by various means and ways), that he decided at once to adopt photography as a business.

A course of instructions from the ambrotypist was arranged, and on the following day he entered upon his brief apprenticeship. The second day's training found the aspiring pupil so far advanced that his work outshone that of his instructor, and at the end of the third days' work he bought the ambrotypist's studio-on-wheels outfit and business good-will, thereby commencing his photographic career in earnest. After a year's experience Mr. Golden sold his business and began to travel as an operator, in which work he was more than ordinarily successful.

At this early period books and journals on photographic practice were rare indeed, and possessed a value which it is difficult to appreciate in these days of cheap journals. Mr. Golden was an early subscriber to our old Philadelphia Photographic Journal and Mosaics, after their appearance in 1864, and by this means was able to push himself ahead in his work of art.

In 1865 disaster followed him in a photographic partnership entered into for the promotion of the business, thus realizing by a sad experience the fallibility of our fellowmen in the business matters of life. Having a spirit not to be downed, Mr. Golden took to the road for some years. In 1870 he settled in the beautiful village of Reinersville, Ohio, and combined photographing and the sale of harness and saddles as a business till 1887, when the harness business was dropped and he took up bee-keeping with photography, which he is following to-day as actively as when he first entered it,

almost 40 years ago. "The chief factor in success in portraiture," says Mr. Golden in a recent letter, "is abundant reading and practice combined. The man who will practice and digest what he reads in his journals," further observes this old worker, "can always insure himself comfort and prosperity in his profession, inasmuch as he can avoid failures and loss, and avail himself of the knowledge of other workers to his own profit."

If we had more such philosophers photography would be eased of many of the difficulties which accompany it to-day. Think as you work.

Reverting to his apiarian interest, I may say that Mr. Golden has been a frequent contributor to the columns of the Bee-Keepers' Review in past years, and has recently begun to write for the American Bee Journal. The first article in this number, as the reader has doubtless already noticed, is from Mr. G.'s pen. It is always a pleasure to me to be able to show by picture and sketch the prominent veterans in the active field of apiculture.

Among the Bee-Papers

Conducted by "GLEANER."

PACKAGES FOR EXTRACTED HONEY.

R. C. Aikin, in Gleanings, thinks instead of 60 pounds, the square tin cans should hold 50, two 50's in a case being heavy enough to handle, and the round 50 being oftener ordered. He likes cans better than barrels. Although costing a little more, they are much more convenient when honey candies. He puts in a tank six cans covered with water over a slow fire for 24 or 48 hours, and does not even take off the screw-caps. Thinks the consumer should get it in the original package, which *must* be cheap, perhaps something like an oyster can.

WHEN TO EXTRACT HONEY.

The Dadants leave honey on the hives to ripen till the season is over, but E. France says in Gleanings that this will not work with him. He extracts just as the bees begin on the white honey, so as to get out all the old dark honey, then a second extracting will be tinged still with dark and must not be mixed with the best; and then in a good season he extracts three times more to get his pure white crop, leaving enough basswood honey for the bees to winter on.

CLEATED SEPARATORS.

B. Taylor uses separators of ⅛ inch stuff, and instead of being in one piece the separator is in two parts scant ⅜ inch apart, thus leaving at the middle a free passage from one section to another. The two parts are fastened together by cleats of ⅛ stuff at the points where the wood of the section touches the separator. This leaves the surfaces of the sections ¼ inch apart when shipped, instead of the usual ½ inch.—Gleanings.

QUILTS AND BEE-ESCAPES.

At the California State convention, says Rambler in Gleanings, quilts had been discarded by 10 of the 19 who had used them. The bee-escape was considered not so much of a success here in clearing an extracting-super as it might be. The escape clears the super of bees; but the honey, deprived of its warming factor, gets cold during the night, and is extremely hard to extract.

SELLING GOOD HONEY.

C. Davenport tried to sell a merchant honey, asking 17 cents. Merchant said he could buy all he wanted for a shilling. D. asked merchant what he paid for butter. 10 to 20 cents according to quality. As much difference in honey as butter, says D. Then he left a case of 24 sections on trial—no like, no cost. Result, merchant gets regularly three cases a year for his own family.—Gleanings.

IS BEE-KEEPING BECOMING A SIDE ISSUE?

Editor Hutchinson read an essay at the Toronto convention rather taking the ground that hereafter no one could afford to devote his whole time to bees, and E. T. Flanagan takes issue with him in Progressive. Mr. Flanagan thinks that such a view can only come from a partial knowledge of the field. "This is a large country of ours, and no one man is fully acquainted with its resources for producing honey. There are millions of acres yet of unreclaimed land, and abounding, too, in honey-producing plants.....These all will in due time be occupied by the specialist." He also refers to changes going on that may again make the cultivated regions a paradise for the bee.

THE GIANT BEE OF INDIA.

The foot-note of the editor on page 169 is timely. It is not always safe to say what is impossible, but there certainly are things in the statements made by Mr. Holt that look very improbable. After we have been led to believe that the domestication and importation of *apis dorsata* was an impossibility, we are quietly told that it has already been in this country some four years. How has the thing been kept quiet all this time?

If the statements made are true, $3 to $8 is a very low price for a queen, but what is the difference between the queens of the different prices?

That a cross will gather more than twice the amount of either parent kind is remarkable. That the workers live three times as long as common is new. That a drone put in a cage with a queen will fertilize her at once, and will "fertilize as many as four queens before he stops" is—well, what do you think it is? The question arises, after the drone has fertilized four queens and stops, how long will he stop before he is ready for another four? And what is the price of such drones? One of them might be caged and passed around among bee-keepers at so much per day.

On the whole, it may be charitable to suppose that there is a young man down in Kentucky whose mind is somewhat unbalanced.

THE AGE OF COMBS.

How much things go by fashion. It really seems that fashion has something to do with the length of time combs are considered good. If my memory serves me, it is the fashion in England to think it is better to reject brood-combs four or five years old, whereas the answers on page 176 of this journal show that the fashionable thing on this side is to consider age never a detriment. Possibly the truth lies between the extremes.

Canadian Beedom.

Conducted by "BEE-MASTER."

The Swarming of Bees.

We have all styles of bee-keeping here in Canada. There are some localities where the old-fashioned straw-skeps are used almost exclusively; in others, box-hives are the prevailing ones. In some sections of the country there are none but movable-frame hives kept, and these are of all sorts and sizes. Traces of the old superstitions may be found here and there. I once met with a quaint old lady who told me that they formerly kept bees, but a member of the family died, and they neglected to inform the bees. The consequence was that all the bees died also, very soon afterwards.

In those localities where the old style of bee-keeping in straw and box hives prevails, natural swarming is the only kind known. When a swarm issues, the primitive custom of rattling all the tin pans, pots and kettles is usually observed, and there is great faith in the efficacy of noise and clatter in causing the bees to settle. By the way, so high a scientific authority in bee-keeping as the late Mr. Frank Cheshire, thinks this is not wholly a superstition. In Vol. I. of his great work on "Bees and Bee-Keeping," page 127, he says: "I believe that the old idea, now almost universally discredited, that these noises disposed the bees to settle, is accurate." He adduces two or three arguments to support his view, among the rest that bees choose quiet times—notably Sundays—for their departure, which reminds me of an old Presbyterian minister, one of the class who believe in keeping the "Sawbith, and every thing else they can lay their hands on," who used to be a great bee-keeper, but finally abandoned the pursuit, because the pagan insects had such a fashion of swarming on Sundays, and he doubted the propriety of hiving them on that sacred day.

Of course our best bee-keepers know all about artificial swarming, or dividing, but I do not think many of them practice it except as an occasional thing and for some special purpose.

There is not much faith here in any self-hiving device, although one of our supply firms advertises a self-hiver, and

speaks of it as though it were a success. I spent $5.00 on Alley's first self-hiving arrangement, but could not make it work, and as "a burnt child dreads the fire," I am loth to invest any more money in that direction, until there is better evidence that automatic swarming is practicable than I have yet met with.

While I believe bees work with a zest after naturally swarming, which they do not evince in connection with any method of artificial swarming, and I enjoy the contemplation of their ardor and interest in founding a new home, I have settled down on artificial swarming as the best for me in my circumstances. I cannot be always with my bees, neither can I keep them closely watched, and I prefer to take the slight disadvantage there is about artificial swarming to the dire affliction of occasionally having a rousing swarm go off with my best queen.

I read with much interest Mr. Doolittle's article in the American Bee Journal of March 7, 1895, on "How to increase bees when natural swarming is not wanted." The two methods described are perhaps the neatest approximations to natural swarming that can be attained by any artificial plan, but it seems to me there are too many manipulations to be performed and they take too much time. On the first of the plans given, I should be afraid the bees might go back to the old hive either by twos and threes, or *en masse;* and on the second plan, I should hate to immure them for four hours in a box with wire sides, checking all active operations and throwing them into a state of bewilderment. On the method I employ, the work is quickly done, and the bees will be busily engaged in making the best of their changed circumstances long before Mr. Doolittle has his imprisoned bees liberated from confinement. Bees are quick at accepting a new state of things, and soon adapt themselves even to an untoward condition.

My method, which I call mine not because it is original with me but simply because I practice it, may not be the best, but it suits me, and works well enough for all practical purposes. I wait until the bees give evidence that they are making preparations to swarm naturally. Some of our bee-keepers have been using a phrase lately which has a very scientific smack—"outside diagnosis." It means the same as what the old darkey called, "habits o' bobservation." Any bee-keeper worthy the name, spends lots of time in watching the bees as they go in and out of the hive, linger at the precincts, or cluster near the entrance.

Some fine day I say to myself, "That colony has a notion of swarming." Then I anticipate them. I take a clean, empty hive having frames with starters, or full sheets of foundation in them. I haven't made up my mind which is the better plan, though I incline to full sheets because I want worker-comb, and I think the bees, like a newly-married couple, prefer a furnished residence to an empty house.

I set the new hive beside the old one, take out one of the middle frames, then open the old hive, find the frame on which the queen is laying, lift it with the adhering bees out of the full colony, and put it in the new hive in place of the removed one. Then I move a full frame of the old hive to the center, close up the ranks, and put the spare frame of foundation on the outside. Then I move the old hive to a new place, and set the new hive on the old stand. This gives the bulk of the working force to the new hive, which has a full frame of brood and the old queen. The working force soon falls in with the new arrangement, and makes itself as busy as possible. In a few days, the old hive becomes strong with bees, it is not long until it has a laying queen again, and all is lovely with both hives.

The beauty of this plan is that there is no absconding, for the swarm will not leave a frame of young brood, and the other colony is not likely to be populous enough to want to swarm during the remainder of the season. I do not urge every one to adopt this plan—all I say is that it suits me, and in bee-keeping as in some other things, every man should be a law unto himself.

Notes AND Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Feeding Back.—"During one year that I kept track of everything, I made $5.00 per colony during the month of August for each colony fed. That year I fed extracted honey to 9 colonies to finish sections, and I spent only about 15 minutes per day feeding. Results, $45.00 for the month of August. This is nearly $2.00 per day. Doesn't that pay?"—F. A. Salisbury, in Gleanings.

One is led to wonder why such men as R. L. Taylor and Mr. Salisbury do not devote their entire time to feeding back, or at least all the time the bees are not actively engaged in honey-gathering from the flowers. If one can make $5.00 per colony for each colony fed one month, surely it would pay to keep a few hundred colonies busy about three months in the year. This will beat bee-keeping in the ordinary way two to one. But for some reason I am led to feel that there must be a mistake some place. I am sure of one thing at least—many plans that seem to work successfully with a few colonies will prove to be a failure when applied to a large number of colonies. I am also convinced that the average bee-keeper will make a failure of feeding back, and the less he has to do with it the better off he will be. Of course, this is only "my notion," but then I look upon myself as being possessed of average intelligence and ability, and I frankly confess that I have never been able to make any kind of feeding back pay. So my advice is, if you feel you must try the experiment for yourself, do not go in too heavy at the start.

Dampness Injures Flowers.—"Cold, rainy weather is detrimental, chilling the flowers and causing the pollen to fall."—Report of the Secretary of Agriculture for 1893.

Here is a point out of which bee-keepers should not fail to make the most they can. We have been insisting that it is not necessary to spray any kind of fruit when in bloom, and now comes the Government Experimenter and says that it is an injury to the fruit to spray when the plant is in bloom. He says, in an experiment made with a Mount Vernon pear tree at Geneva, N. Y., that the tree was "sprayed continuously for eight days, the entire time of blooming, and not only was no fruit set, but the foliage was rendered sickly and the tree's condition greatly impaired." If we can make the fruit-growers understand that there is not only danger of killing the bees, but that spraying when the plant or tree is in bloom may destroy the fruit as well, then we may rest assured that we will have no more trouble in this direction. We may not be able to move the horticulturist by showing him our danger of loss; but if we can convince him that he will lose, too, then we appeal to his selfishness as well as his love of humanity. As we are all a little inclined to be selfish, it will be well to give the above facts as wide circulation as possible.

Nor Any Other Time.—"Open air feeding should not be started too early in the spring, and only when the weather is warm. The food should also be very much thinner than ordinary bee-syrup."—Editorial in British Bee Journal.

It seems strange to me to have an editor of a bee-paper explain how or when to feed in the open air. If bees must be fed syrup of any kind, why not feed it from the top of the hives? Then you will know exactly what bees you are feeding and how much you have fed them. If fed in the open air, it seems to me that many colonies which did not need feeding would carry away as much as those that did need it. Then, it seems to me that I would not want such a commotion as open air feeding is sure to create, if there is no nectar being gathered from the flowers, and has not been for some time. My advice would be not to feed in the open air at any time. If colonies must be fed in the spring, the sooner one can get through with it the better. Bees wear out mostly, and they will wear just as fast when carrying in sugar syrup as they will when gathering nectar. "A hint to the wise is sufficient." Do not feed too much.

Are They?—"I concluded the theory of drone-eggs not being influenced by the impregnation of the queen was all bosh."—W. C. Wells, in Canadian Bee Journal.

Is there any foundation for the above statement? Does the sperm fluid from a black drone in any way affect the male progeny of an Italian queen? Or, if a black queen be mated with an Italian drone, will any of her male progeny show any traces of Italian blood? Might it not be well to do some careful experimenting along this line? While the experimenting is going on will some one please rise and explain why it is that the cell furnished by the *female* bee always produces a *male* when it is not united with a male cell? Does the mother always furnish the *male* element of an animal which is the product of the union of two cells?

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HAVE YOU HEARD THE LATEST?

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Mar. 18.—Demand is good for all grades of honey excepting dark comb. We quote: Fancy comb, 15c.; No. 1, 14c. Extracted, 5@6½c. J. A. L.

CHICAGO, ILL., Mar. 7.—During the past two weeks a good movement has been felt in the market. Sales have been in small lots, but quite frequent. We quote: White comb of the highest grade, 14c.; off in color, 13@13½c.; yellow, 10@11c; dark, 7@9c. Extracted, 5½@ 7c.—the higher price for white in 60-lb. cans.
Beeswax, 28@30c. R. A. B. & Co.

KANSAS CITY, MO., Mar. 14.—Demand is fair for comb and extracted. We quote: No. 1 white, 1-lbs., 14@15c.; No. 2 white, 12@13c.; No. 1 amber, 11@12c.; No. 2 amber, 10@11c. Extracted, 4½@6½c. Beeswax, 22@25c.
C. C. C. & Co.

CINCINNATI, O., Mar. 19.—Demand is slow for extracted and comb honey, with a fair supply. We quote: Comb honey, 13@16c. for best white. Extracted, 4@7c.
Beeswax is in good demand at 25@28c. for good to choice yellow. C. F. M. & S.

PHILADELPHIA, PA., Feb. 15.— Comb honey is very plenty and slow of sale at 12@13c. Extracted in fair demand at 5@6½c.
Beeswax scarce at 30@31c. W. A. S.

NEW YORK, N. Y., Feb. 20.—We are gradually working down our stock of comb honey, and the indications are that we will succeed in disposing of all of the white honey and possibly all of the dark during the spring, at following quotations: Fancy white, 1-lbs., 12c.; fair, 10c.; buckwheat, 8@9c. The market is well supplied with extracted honey. Demand is fair for choice grades, while common stock is neglected. We quote: White clover and basswood, 5½@6c.; buckwheat, 5@5½c; Southern, 45@55c. per gallon, according to quality. Beeswax firm and in good demand at 30@31c. H. B. & S.

BUFFALO, N. Y., Mar. 16.—The honey market is getting quite well cleaned up here. We quote: Fancy, 13@14c.; choice, 11@12c.; buckwheat and commoner grades, 7@8c. Extracted is in very light demand here, and we would not advise shipments. B. & Co.

SHIP Your Butter, Eggs, Poultry, Veal, Beans, Potatoes, Hides, Pelts, Wool, Hay, Grain, Green and Dried Fruits, or ANYTHING YOU MAY HAVE to us. Quick sales at the highest market price and prompt returns made. Write for prices or any information you may want.

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R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 28 & 30 West Broadway
CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.

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WM. A. SELSER, 10 Vine St.

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C. F. MUTH & SON, cor. Freeman & Central avs.

MINNESOTA.—The regular semi-annual meeting of the Southern Minnesota Bee-Keepers' Association will be held on the first Monday in May, 1895, at LaCrescent, Minn. All bee-keepers invited. E. C. CORNWELL, Sec.
Winona, Minn.

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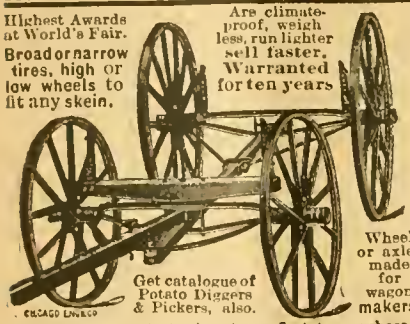

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General Items.

Gathering Pollen and Rearing Brood.

Bees have been flying every few days all winter, and on Feb. 21 they brought in their first pollen; willows are beginning to bloom nicely. I opened a hive of black bees to-day, which I bought of a neighbor last fall, and found two full frames of drone-comb, and one of them full of eggs; as I do not have any use for black drones, I promptly replaced those combs with frames of worker-comb that I had stored away, and laid those drone-eggs away to dry. Every colony has from one to three frames of sealed brood, and the bees are bringing in immense quantities of pollen from the willows, and a very little honey. Prospects are good for 1895. Just now I am at White River Valley, 12 miles from Seattle.

Orillia, Wash., Feb. 27. A. W. STEERS.

Seem to be Wintering Well.

My bees are in the cellar yet, and seem to be wintering well so far.

JOHN WAGNER.

Buena Vista, Ill., March 25.

Bees All Alive and Buzzing.

We have just come through the severest spell of weather that has occurred here since I have resided in this region, now 12 years. For six successive nights the temperature ranged from zero to 18 degrees below, which, for this locality, is very unusual and extreme. For a few days we have had mild weather so the bees have been flying.

I find every colony in my yard is alive, and apparently ready for business. They are exceedingly eager for any kind of substitute for pollen. The most of my hives had about four thicknesses of burlap put across the top under the cover and down on the outside; a few, however, were without any kind of protection except the covers sealed down by the bees. I have not noticed any apparent difference in the strength and activity of the two divisions. At the time of the coldest weather there was about three inches of light snow on the tops and in front of the hives, thus serving as a very excellent protection.

I had a great desire to attend the convention of the Colorado State Bee-Keepers' Association, but it was my misfortune to be sick at the time. I came to this place a physical wreck, but for several years I enjoyed fair health, when the grippe gave me three annual visits, since which my health is poor during the winter. I think I am in one of the very best localities for bees in all the alfalfa region of the West, and am very loth to leave it. But I fear I shall have to try a change to another climate. This seems the more necessary as the health of my wife seems to demand a change to a lower altitude and a warmer climate.

L. J. TEMPLIN.

Canon City, Colo., Feb. 26.

Literature of '61 and '95 Compared.

Say, "Bee-Master," what's the matter with you? To be sure, that first volume of the American Bee Journal is filled with "solid, useful contents." The bee-keeper who has never read it better get it right away. But remember that volume had virgin soil filled with basic facts, and that alone would make it of value, no matter how the facts were dished up. Give 1895 the same chance, and it would lay 1861 in the shade. In typographical appearance 1861 is nowhere beside 1895, nor in general snap and git-up. If Bee-Master will wipe out of that first volume all that is quoted or translated from across the sea, he may be surprised to find how little he will have left. I turned at random to one of the middle numbers in the year, and found more than twice as much foreign matter as original. In general, the foreign matter was good, and it was that which gave value to the whole volume, for in my judgment the original matter was not to be compared with that which we are getting in 1895. Seven pages are taken up with discussing the theory of J. Kirby, which is as follows, on page 152: "The workers in their flight with the drones alight on the drones' backs and cause them to give off their semen, which the workers lick up and carry to their appropriate cells in their hives, for the purpose of propagating the young queens." To be sure, that isn't a fair specimen of the original contents, but think of filling up seven pages with such stuff! Would it be endured in 1895?

While it may not be best to brag unduly of the wonderful excellence of the apicultural literature of to-day, the excellence is none the less there, and when some one says it's badly deteriorated, can you blame Editor Hutchinson for speaking the plain truth?

C. C. MILLER.

Marengo, Ill.

[On this same subject comes the following, which will close the discussion of improved and unimproved bee-literature in these columns, as there is no cause for complaint in regard to the matter, for the bee-literature of to-day is so much in advance of the price asked for it, that no one but a Whatyoumaycallhim would say aught against it:—THE EDITOR.]

MR. EDITOR:—On page 189, Bee-Master says bee-literature was better in 1861 than at the present day. Now it is a pity that Bee-Master didn't live and "shoot off" his pen then. If he isn't satisfied with bee-literature the way it is now, why doesn't he make it better? He takes up a whole column every week, and I don't see that his mite is any better than nine-tenths of the articles published. For my part, I am satisfied with the leading journals the way they are to-day.

JOHN M. RANKIN.

St. Clair, Mich.

Bees Had a Good Flight.

Bees had a good flight Feb. 28, in the afternoon, but it is too cold for them to get out much, only when the sun shines out brightly, as the air is cool in the shade.

C. A. HUFF.

Clayton, Mich., March 23.

Wintering—Best Bees—Paralysis.

This has been a hard winter on bees on the summer stands, I think. I packed 54 colonies on the summer stands, about one-third of them being weak in bees, but with plenty of honey. Now the question is, What caused those colonies to be so reduced in number, some of them covering only four or five combs when packed for winter? They were strong when basswood bloomed, and I kept them down to 54 from 49, spring count. Did they work themselves to death?

Our season was very dry, especially through the fall bloom. Buckwheat was a failure, but golden-rod yielded quite good. The bees worked hard, and gave me over 3,000 pounds of honey, besides 30 to 35 pounds each for winter. Perhaps there being insufficient water near them, caused them to rear brood insufficiently.

So far I have lost 5 colonies, with as many more that are as good as gone. I think now that I will save about 40 colonies.

I have been very much interested in the discussion as to which is the best bee. I wish I knew. From my experience in the last 14 years with both blacks and Italians, I should say blacks. I find bees from an Italian queen mated with a black drone are excellent workers, but I believe some of my largest yields have come from black bees. I find the blacks winter better on the summer stands than Italians. I am satisfied that locality has a great deal to do with it.

I believe that what bee might be best for

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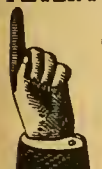

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this locality might not be the best for Texas or California. Basswood and clover are our main sources for surplus, and I find the blacks always have their share from these sources. "Bands" are no object with me, as I keep bees for the money there is in it first, and bands second. I shall continue to experiment with the different races, as I want the best bee if I can get it.

I have had some experience with bee-paralysis in my apiary. I have had two of my best colonies ruined with it. It seemed to be worse then than now. Two years ago I had two colonies badly affected with it. I made rather a weak brine of salt and water, and opened the hives and sprinkled bees, brood and all, until all was real wet, and the disease disappeared; but I think perhaps it might have disappeared any way, the same as it did from Dr. Miller's bees when he painted his granary red! B. W. PECK.

Richmond Centre, Ohio, March 9.

A Good Beginning.

I have just started in the business, and I wish to make it a success. Last year I extracted nine gallons of honey from a 4-frame nucleus that I paid $1.25 for. How is that for this part of the country, and a beginner? A. M. BARFIELD.

Stone Point, Tex., March 9.

An Experience With Bees.

The spring of 1895 finds my bees in fine condition—better than I ever have had them for this time of the year. I have 8 colonies in good condition, having gone into winter with 12 colonies. Three of them that died had the foamy kind of honey which was described on page 38, and the other one starved. Last spring I had 4 colonies, and I bought 7 more in gums, and transferred them into the movable-frame hives. I had two swarms, and saved one, the other going to the woods. I paid $1.25 apiece for those I bought, and from them I got 350 pounds of comb honey, which I sold to my neighbors for $35. Now this is no great amount of money, but I can afford it as I make my living on the farm, and can attend to my bees at odd times, in the spring. When they swarm my wife attends to the hiving until she gets hold of some bad ones, then she toots the horn for me.

On Sept. 1, 1894, I received two 5-banded Italian queens. Theirs are the best and prettiest bees I ever saw. One of the colonies I can manipulate without smoke, while with the other I need smoker, a pitch-fork, and a butcher-knife. Both are 5-banded. Can any one tell me what makes the difference? I never saw any Italian bees before. After further trial I will report as to the success I have with them.

J. M. JEFFCOAT.

Pike, Tex., March 8.

Cellar Wintering—Marketing Honey.

I have wintered my bees very successfully for a number of winters in the cellar under my house, where I keep vegetables, but the two winters before the last they were left on the summer stands, and each winter I lost exactly half the colonies I had. Last winter I put 26 colonies into the cellar, and took out 26 all in good condition, I thought, but they commenced robbing, and before I could get them stopped they had cleaned out 7, leaving 19. I had no swarms, but captured an absconding swarm and put it into a hive with full combs and some honey. From these 20 I took 48 pounds of comb honey and 984 pounds of extracted. All is sold to old customers—the extracted at 10 cents per pound, and the comb at 12½ cents. It was not a large yield, but fairly good for such an extremely dry season. The quality of the honey was never better.

When I commenced the business, some 12 years ago, I could hardly sell extracted honey, but I never sell a package of honey without a label on it, giving my name and address, and guaranteeing it pure honey,

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and now a large majority of my customers would rather have the extracted, and are not afraid of it when it becomes granulated. I put the price on my honey, and if a customer does not want to give it he can let it alone, as extracted honey will keep, and if not sold this year it will sell next, with a little trouble to liquify it.

There is great injury done to the price and sale of honey by producers rushing their honey to the towns and taking whatever the merchant will give for it, often selling at ruinous prices, and that often fixes the price for that season.

I want to say to those who have been writing to me about the matrimony-vine, that I have none of my own—none grows on my land. It will not do to send it by mail, but it might be sent by express. No, I don't want to employ an agent. I wish to say to A. D. Sellers, of Springfield, Mo., if this should meet his eye, that I answered his letter as directed, I think according to his directions, but in due time it came back to me, and I don't know where to send it.

A. J. DUNCAN.

Hartford, Iowa, Feb. 18.

Bees in Pierce Co., Wash.

Can any of the readers of the American Bee Journal tell how bees do in Pierce county, Washington? J. R. K.

More than Enough Rain.

We have now had 24 inches of rain—7 more than enough. My bees are in fine condition. I have a student in bee-keeping from Holland. A. J. COOK.

Claremont, Calif., March 18.

Appear in Prime Condition.

I now have 10 colonies of bees, and they appear to be in prime condition, while most of my brother bee-keepers have lost heavily.

DAVID H. WRIGHT.

Madison, Wis., March 16.

Bee-Keeping in Mississippi.

I have just returned from my hunting and trapping tour, having been away nearly all winter in the wilds of Arkansas. I have been looking over my five apiaries, and don't think I ever saw the bees wintering any better, although we have had one of the coldest winters ever known here. Snow has laid on the ground for 23 days, with ice to the thickness of 4 inches. The prospects are for a good honey year, as all early-flowering trees have been kept back.

I have been like Dr. Miller, on the fence. I have been on two fences at a time—one is on the 8 and 10 frame hive; the other is on the best kind of bees for honey-gathering. As I have been experimenting on both, I have tumbled off on the 10-frame side; and the best honey-gatherers are bees from a 5-banded bee crossed with a black drone. This makes the best and hardiest bees, that will gather 20 per cent. more honey than either the 3 or 5 banded or black bees, and I don't find them very hard to handle. But what are we keeping bees for? Is it for pleasure or for profit? If we keep them for fancy, then keep the five-banded; for pleasure, 3 banded; but if for profit, then give me the above cross—5-banded crossed with black droues. J. H. SIPLES.

Gunnison, Miss., March 3.

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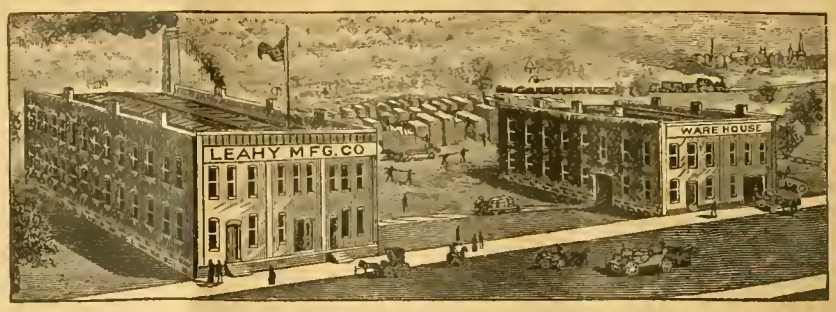

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Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

What About Late Breeding of Bees?

Query 965.—1. Is late breeding desirable? 2. In other words, do young bees winter better, or worse, than old ones?—Iowa.

E. France—I like young bees to winter.

B. Taylor—1. I think so. 2. Better with me.

Jas. A. Stone—1. Yes, if not too extensive. 2. Yes.

G. M. Doolittle—I let the bees do as they please along this line.

C. H. Dibbern—Yes, I think quite young bees best for both winter and spring.

Dr. J. P. H. Brown—I prefer my colonies to have plenty of young bees for wintering.

Rev. Emerson T. Abbott—I do not want them too young nor too old, but just "mejum," as Samantha would say.

Prof. A. J. Cook—1. I think it is. 2. I think they do, though usually bees are young enough, if properly cared for.

Dr. C. C. Miller—I think I'd risk the young ones, only I'd want them all hatched while bees were flying well.

Mrs. L. Harrison—1. I think so; they never bred so late in our locality as this year (1894). 2. I prefer young ones.

W. G. Larrabee—All animals can endure the cold best in the prime of life, and I think bees neither too old nor too young are liable to winter best.

Wm. M. Barnum—Yes. I would rather go into winter quarters with 2,000 young bees than 4,000 old bees. Let them "breed" as long as they will.

Eugene Secor—I have always let the bees manage that business to suit themselves, and my uniform success in wintering, emphasizes the wisdom of that notion.

Mrs. J. N. Heater—I would not have them so young they could not have one or two good flights before cold weather, but if left to themselves the bees will manage that.

J. E. Pond—Yes! I breed them as late as possible. 2. Undoubtedly young bees winter better than old ones; that is, they do better in the spring when a large force is needed.

Jennie Atchley—As our bees here in the South breed almost all the year, I do not know. 2. If I lived in a cold climate I would prefer young bees, or the late fall hatching. But I may be wrong.

Chas. Dadant & Son—Young bees are needed to fill the place of the old ones that die in issuing forth during the cold weather. We never check fall breeding; let the bees attend to it as they please.

G. W. Demaree—I doubt if "*late* breeding is desirable." But bees evidently winter with less loss if there is a fair proportion of young bees in the colony that have learned to fly out before the colony is shut in by severe winter weather.

Rev. M. Mahin—1. If a colony is strong there is nothing to be gained by late breeding. I once had the queen of a strong colony to get hurt early in August, and not another egg was laid in the hive that season. I expected that the colony would perish, or be very weak, but it proved to be one of my best the next season.

J. A. Green—I know of nothing tending to prove that late breeding is not desirable, though that might depend upon what was called "late breeding." I have never had bees winter better than after seasons in which the honey-flow lasted until Sept. 20.

R. L. Taylor—1. Yes, unless the colony is already strong. 2. In my experience those colonies that have become strong by late brood-rearing have wintered so at least. I can say a strong colony of young bees winters better than a weak one composed of old bees.

P. H. Elwood—Yes, but not too late. Nature's way seems best, *i. e.*, brood-rearing continues to the end of the honey harvest. This preserves the proper proportion of young bees for spring brood-rearing. 2. Very young bees are not needed for winter, but for springing.

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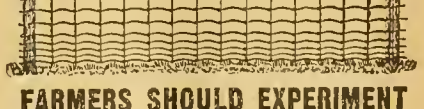

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and not always take the word of interested parties. Very few of them have any idea how much the common soft wire will stretch. They may have been lead to believe it a mere trifle. It is an easy matter to prove that a No. 9 wire, under a strain of about 1000 lbs. will stretch from 1 to 1½ in. **per foot** and it never takes up its own slack. That accounts for those little end ratchets filling up so quickly. Our local agent will furnish a powerful stretcher for this experiment.

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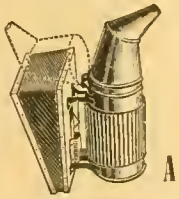

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35th Year. CHICAGO, ILL., APRIL 11, 1895. No. 15.

Contributed Articles.

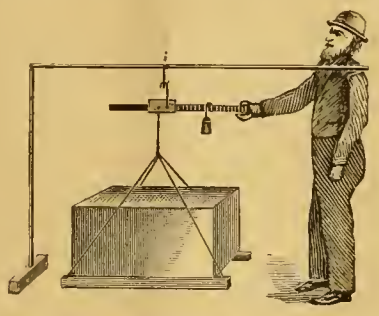
On Important Apiarian Subjects.

Handy Arrangement for Weighing Hives.

BY L. G. CASH.

I will give my method of weighing hives to ascertain increase of honey or amount of winter stores in the hive.

Take four common screw-eyes (I use No. 108), and screw one in each corner of the bottom-board. Next take four stout



pieces of twine about 4 or 4½ feet long. Take four stout wire hooks and tie one to one end of each string, the other end of the four strings to be brought together and tied into a ring, or else made into a loop. The four wire hooks hook into the screw-eyes, making a swing to swing the hive.

Now take two pieces of 2x2 inch pine, about 5 feet long, and fasten the ends together with a common barn-door hinge, or strap-hinge, which will allow the two pieces to fold in the form of an inverted ⅂. To one end I nail a strip across, each side projecting about 8 inches, to form a "foot;" the other end rests on my shoulder. Fasten a hook or stout screw-eye about half way from the end on the shoulder and hinge; take a pair of old-fashioned steelyards, swing them to pull on the shoulder, hang on the strings below, and you have a pair of scales that beat carrying either hives or platform scales.

The bees need be disturbed but very little, as all that is necessary is to swing the hive clear of the ground, mark the weight of the empty hive on the under side of the cover, and when the super is put on add its weight, and the amount of honey in the hive can be easily ascertained.

The four screw-eyes are left in place permanently.

Russelville, Mo.

No. 6.—The Production of Comb-Honey.

BY EMERSON T. ABBOTT.

SECTIONS.

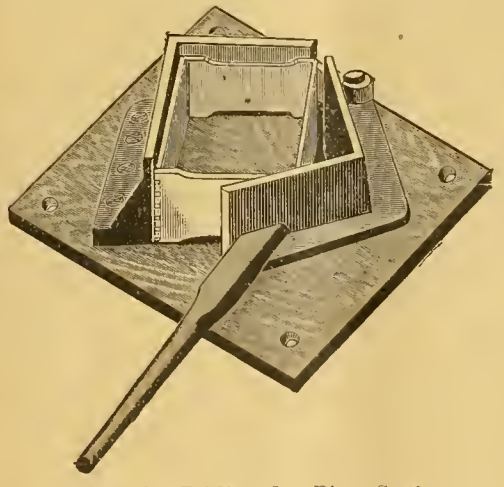
I have taken it for granted that no one in this day will think of trying to secure a first-class marketable article of comb honey without using sections. The market seems to demand that these sections should not weigh more than a pound when filled. I am quite sure, however, that bee-keepers have catered to this demand at a loss, for it is my candid opinion that a given number of bees will store more honey in a two-pound section than they will in a one-pound section. But if sections are used open all around, as illustrated in a former article, and no separators are used, the difference in favor of the two-pound sections will not be so great.

Also, I take it for granted that the sections used will be of the one-piece variety, as there are not enough of any other kind used at the present time to make them worth mentioning.

I do not think it pays to use anything but first quality of these, for surely they are the cheapest in the end, and will add enough to the looks of the honey to more than pay the difference. Of course, we must produce honey as cheaply as possible, in these days of poor crops and cheap things, but there is a possibility sometimes of getting things too cheap, and when it comes to No. 2 sections, or even cream for the producer of first-class comb honey, it is getting it down a little too fine, in my opinion. I prefer the 1⅞ section.

QUEEN-EXCLUDING HONEY-BOARDS, ETC.

I have said nothing about queen-excluding honey-boards, as I look upon them as a needless expense for the comb-honey producer. I have had a queen go into the surplus arrangement only once in ten years. Neither do I say anything about reversing, divisible brood-chambers, etc., as Michigan seems to have a patent on all of these things—and I am perfectly willing that she should keep them, with a lot of other useless traps that are of no practical utility to the rank and file of bee-keepers; and, surely, a beginner has no more use for them than a dog would have for two tails. Their utility, in fact, is about the same. They would both make very good freaks for a museum. If anyone makes a business of reversing nowadays, I do not know it, and, as to a divisible brood-chamber, I will have to change my mind materially as to the



A Press for Folding One-Piece Sections.

benefits to be derived from it before I would think for a moment of using one, or recommending it to anyone else.

COMB FOUNDATION.

I have my own ideas about the use of comb foundation, and I may say just here, (for the benefit of Dr. Miller) I have

them about everything else for that matter. When I want some real, delicate, superfine comb honey for my own table, I do not use anything but very small starters, and I want those made out of the very thinnest foundation that can be had. I have a notion that bees will make just a little finer quality of comb when they secrete their own wax than they will if foundation is given them. However, there is not enough difference in quality to cause the general public to pay any more for the honey. This being the case, and concluding that most people are in the comb-honey business "for revenue only," I would recommend the use of full sheets of foundation of the very best quality that can be had. When I say "best quality," I mean the thinnest and whitest foundation that can be made out of pure beeswax. I would never think of using in the sections for full sheets anything but "extra thin." I think the honey-producer who uses any other grade runs a risk of injuring his reputation, for a producer of the finest quality of goods.

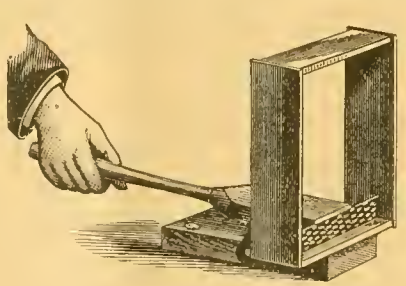
While I recommend the use of foundation, yet I am aware there are certain times and conditions when full sheets will not be found of as much value as some people would have us believe. If the honey-flow is a long one and comes in very slowly, I doubt if the benefit derived will pay for the outlay; but where the honey comes in rapidly, and all of the conditions exist for getting a first-class article, then there is no question in my mind as to the advantage of full sheets of foundation.

WHEN TO PREPARE THE SECTIONS.

Many of the bee-hooks and writers on the subject of apiculture say get the sections all ready in the winter. They say the bee-keeper has nothing else to do then, and he should get everything ready for the coming season. This is all well enough as to hives, but when it comes to making up sections and putting in foundation, I say don't do it. It all sounds very nice to say you have everything ready in advance, but sections prepared in advance will never be in as good condition as those prepared just before they are needed.

A crate of sections should never be opened until the bee-keeper is ready to put them on the hive. If he has so many colonies that he cannot do this work himself, it will pay him better to hire some help than to make them up in the winter. Just as soon as sections are exposed to the air they begin to darken, and then the dust settles upon them and soils them more or less.

Then, it is also much better to leave the foundation in a box until the time comes to put it on the hive, as it will be fresh and free from dust, and the bees will go into the sections without any trouble, With a good section press and a foundation fastener a large quantity of sections can be prepared in a very short time, and such sections will come off of the hive in much better condition than will those which are made up in the winter and left for two or three months exposed to



The Parker Foundation Fastener.

the air and dust. I use the Parker foundation fastener and the section press, illustrated on this and the previous page.

Another thing I would never do is to use old sections which have been partially drawn out the year before. Many advocate having the combs drawn out in advance. I think this a serious mistake, as I am confident that the comb will never be as delicate and tender as it would if it had been filled with honey at the time it was drawn out. Then, such honey is more apt to sour in the combs than honey which is put in slowly as the comb is drawn out.

By the use of full sheets of comb foundation the bees are able to prepare the combs as fast as they need them, and much better results are secured than when drawn-out combs are used. One should so manage as to have as few empty sections left over as possible, and unless those are in very fine condition, it will pay to throw them away and put in fresh ones.

St. Joseph, Mo.

Do Bees Pollenize Strawberry Blossoms?

BY HON. EUGENE SECOR.

I notice on page 190 that ex-president Abbott takes exceptions to my statement that bees do not pollenize strawberry blossoms. I wrote that sentence after a good many years' observation, and with a good many pangs of regret, because it was contrary to a long-cherished desire I had of proving to my horticultural friends that bees were necessary to insure a strawberry crop.

I have raised strawberries and kept bees for 20 years. I have many times gone to my strawberry-patch when the plants were in bloom, but scarcely ever found a bee working on the blossoms. So I wrote that sentence advisedly. I did not dare to stand before such an intelligent lot of men as compose the State Horticultural Society of Iowa, and utter a different sentiment. I should have expected criticism. Many of them are bee-keepers also. No one objected to the statement I made.

In confirmation of my theory that bees are not necessary to pollenize strawberry blossoms, I will state that I came to this county before a bee—either domesticated or wild—had ever entered it. At that time wild strawberries were just as abundant and fruitful as now. This fact, coupled with my later observations, led to the penning of that sentence.

Another reason for my belief is the practice of strawberry-growers. When pistillate, or imperfect varieties, are planted for the main crop, every second or third row is set with staminate, or perfect-flowering kinds, to insure a crop. If the bees did the pollenizing, surely the kinds would not need to be so closely planted.

But please understand that I am not arguing to support a theory, but to account for a fact—according to my observation.

Now since this matter has been brought up so prominently, it is desirable to get at the truth. If my locality is an exception to the rule, and if bees elsewhere do work on strawberry blossoms, I shall be most glad to acknowledge their helpfulness. For, as I said, I wanted to believe they were necessary to the strawberry-grower.

I would be pleased to have the testimony of bee-keepers or others who have made observations along this line. I want the facts rather than theories. I don't believe it is beneficial to bee-keepers in arguing with horticulturists to claim more than we can prove. They are as intelligent and observing as we. We must stick to facts. Bring on your witnesses.

Forest City, Iowa.

Spring Feeding to Stimulate Brood-Rearing.

BY C. DAVENPORT.

There has been a good deal said and written about feeding in the spring for the purpose of stimulating brood-rearing in order to have a large force of workers at the right time. Some claim there is a big advantage in this, and others say the benefit that can be derived from it is very slight; and I remember reading one article which claimed that much harm was done by spring feeding.

I do not think there is any doubt that there is a big profit in both spring and early summer feeding in some seasons. Some years we can get a paying crop without, while in others, at least with me, it is impossible to do so. Not that there is no honey to gather, but because there has not been enough to be had before the main flow to enable brood-rearing to be kept up as it should have been. Consequently, when the flow did come, there would not be enough workers to store much surplus. But in my opinion, if there is anything about bee-keeping that requires skill and judgment, it is this kind of feeding, for in this locality the season, amount of stores in the hives, and other things, must be considered in regard to the time to commence, or whether to commence at all—amount to be fed, and how long it should be continued. There is much more about it than I know, or probably ever will know, but some of the things I do know may interest, and possible benefit, some that have not had much experience in this kind of feeding.

Of course we could use hives large enough to hold plenty of stores, so that feeding would not be necessary in such seasons. These are a good kind of hive, if one is keeping bees merely for those things to be found in bee-keeping that we would not sell for money if we could. I think I find as many of those things as anybody, but at the same time, in order to pay expenses, make a living, and lay up a little for a rainy day, I have to make considerable money with them, too. And for the comb-honey producer those big hives are a failure, especially in such seasons as we are having right along now. In using them, if we do not feed in poor seasons, it takes most of the white honey to fill them up, and after they are full the

bees will not work in the sections as readily as they will when they are in a smaller hive. We want the white honey in sections, and then we can let them secure winter stores from fall flowers, if we are in a locality where the honey from such makes suitable winter food. If it does not, or there is no fall flow, we can feed sugar. I consider a pound of the best granulated equal to a pound of clover or basswood honey for winter stores; and there is a difference of 10 cents a pound, and often more, between the two. If we allow 30 pounds for winter stores, this will make a difference of $300 on 100 colonies. This will pay us well for our time in feeding. I am not going to give any theory about it, but I will say the largest yields I ever got were from colonies in 8 and 10 frame hives.

Another thing I would like to say is, that the most prolific queens are not the best, in many cases. I have had some very poor queens that were very prolific. Some of the very best Italian queens I now have, or ever have had, are hardly able to keep 8 Langstroth frames full during the time they should be kept full. Very likely many that read this will think I do not not know what a good queen is, and I feel quite sure this will be the case when I say that last summer I killed a $6 breeding queen that was prolific and equal to at least 10 frames. But that is not the worst. A year ago last summer I sold for $1 a two-year-old imported Italian queen that cost me over $9. I did not need a dollar very badly, either. But if one was to buy some that I have, and I think they are good, the price they would have to pay would make them think that they ought to be good.

Now as to the time to commence feeding in the spring. I do not think, as a general thing, it has paid me to feed much before fruit-bloom, and not even then, if the bees could secure enough from it to keep brood-rearing going on as rapidly as it should at this time. But if they do not, it has always paid me well to feed. In this locality there are no flowers after fruit-bloom until white clover. I generally feed a good deal during this time. If we commence to feed we must keep it up until there is some to be had from the fields, or else stop gradually, for if we get the brood-nest full of brood, and then stop all at once, if there is not much food in the hive, and none in the fields, the brood will necessarily be thrown out, or else starve to death, and then, as a general thing, here in the North such a colony is ruined for that season, as far as surplus honey is concerned. But on the other hand, we must not feed too much. If we do, with small hives, we will restrict the room in the brood-nest, and thus prevent the very object for which we are feeding, namely, a large force of workers to gather the flow which we hope for and expect will come later.

But shortly before the time for the main flow to commence, feed heavy if we wish to fill the brood-nest with sugar stores. Whether this is best or not, in a locality where there is a fall flow, I do not know. I have practiced this somewhat, and I think under the right management, it can be made to pay. But my advice to the inexperienced is to try this on a small scale at first. There are certain difficulties, and much more to learn about this than there is to simply feed enough to secure a large force of workers. In feeding for this purpose, I do not think it is necessary to feed every day. I never feed more than every second day, and a good deal of the time only every third or fourth day. But I think we can push brood-rearing much more rapidly when we wish to, by feeding a small amount every second or third day, than we can by giving a large feed all at once, or a frame of honey for feeding.

I use a good deal of poor and inferior honey and honey-dew when I have it. Such as is not fit for winter stores can be extracted, and by judicous feeding at the right time it can converted, as it were, into many times its weight of white honey. I do not want any more honey-dew for winter stores. Some winters bees appear to winter on it all right; in others they will not. There was a good deal of it gathered here last fall. I put about 100 colonies in with this honey-dew, and the loss so far is about 20 per cent. Very likely it will be 50 per cent. before May—perhaps more. A good many of these hives were badly spotted by the first of January, but as far as I have been able to observe, honey-dew answers every purpose as well as the best honey, when the bees can fly.

When I feed sugar I use the best granulated. I have tried cheap brown sugar, both dark and light, and such as we can get here is not fit to feed bees at any time. There is something in it that does not agree with them.

Now a few words about feeders. I use the Miller for all kinds of feeding, and I think this, or some kind in which we can feed during the daytime without danger of robbing, is best; for here, even quite late in the spring, the nights will often be so cool that bees will not take feed readily from a feeder that is set outside near the entrance, and if they would when the nights are cool, I think it is much better to feed in the morning, and then the feed will be carried below by night, and they will keep quiet and protect the brood better.

Any feeder or method we use in which it is necessary to use smoke every time we feed, is a bad thing. The less bees are smoked and disturbed in the spring, the better.

To illustrate the benefit that can be derived from feeding in some seasons, let me describe one of the out yards. Last year feeding was necessary to secure a crop. The bees in this yard were mostly in 8-frame hives—a few were on 10-frames. The surplus to be gathered from this yard was white clover, basswood and fall flowers. There was but very little fruit-bloom in reach of this yard. About this time feeding was commenced, and continued right through the white clover season, for at first it was so cold at night that it did not yield any, and towards the last it dried up. But in the home yard, about 13 miles from this, white clover yielded enough to keep brood-rearing up, and considerable honey-dew was secured in the spring, which formed on box-elder leaves. I never saw the conditions vary in a few miles as they did last year in this out-yard. Practically nothing was to be had until basswood, which was fair, but it did not last long, but the bees were ready for it, and secured what there was—about 53 pounds per colony in one-pound sections.

Each of these colonies were fed about 30 pounds of sugar, which, at 5 cents per pound, would be $1.50 per colony. Fifty pounds of honey at 15 cents a pound would be $7.50 per colony. Now to deduct $1.50 per colony for sugar will leave $6 per colooy. They also secured enough from fall flowers to winter on, and about 12 pounds of surplus per colony, but we will not say anything about this—we will say the basswood honey was all they got, and we had to feed 30 pounds more sugar for winter stores—this would make $1.50 more to substract from $6.00, which would leave $4.50 per colony. In this yard there were 127 colonies, and this would have left $571.50 from this yard to pay for the work. Reader, do you see the point? Suppose these colonies had been in *big* hives, and had 30 pounds of honey in the spring, they would certainly have used this up if they had not been fed, and they would also have certainly put that 50 pounds of basswood honey in the brood-nest. And, say it took 30 pounds of it to keep them until the next spring, they would have only 20 pounds for another start. They would not have secured any more per colony, or as much, if they were larger, for there were bees enough in this yard to gather all, and more than there was to be had from it, and it did not cost any more, if as much, to rear them in small hives as it would in larger ones. If we would carry the matter out, and count the fall honey, the small hives would come out much farther ahead. With big hives, where no feeding is done, the season is often an entire failure.

If this is not thrown into the waste basket, in my next I will have something to say about swarming, for probably many of you will think that bees, especially if they are in small hives, and fed up as I have described, will swarm before, or right in the midst of, the flow. Southern Minnesota.

An Ominous Cloud in the Horizon.

BY M. H. S. BURLEIGH.

"Pretection to American industry" has been, for a good many years, the magic political slogan at the sound of which millions have danced. We see, in our mind's eye, an American mechanic covered with a shipload of British goods, nearly smothered. A patriotic Congressman comes to the rescue, throws the goods into the ocean, and the mechanic arises and resumes his toil. So far as that side of the question goes, I have nothing to say. Let those journals discuss it that are built for that purpose. Just now I wish to speak of at least one American industry that deserves the protection of six feet of sod over it. It is not a British industry, but characteristically American. It is an industry which has systematically injured a host of our commonest articles of food, and has thrown unnumbered thousands out of work. The name of this delightful beverage is glucose. Some time ago I read of the destruction of a factory where it is made. The quantity of glucose produced at this one factory, in the course of a year, caused the production of all other sweets to take a back seat so far as quantity is concerned, common sugar alone excepted. The yearly output was 840 tons—an amount sufficient, with that made elsewhere, to form the principal ingredient in every pound of honey, every gallon of molasses, syrup, and jelly, and all the confectionery, produced in the United States. I do not know whether beer is made any worse by the liberal use of glucose in it or not; but doubtless it aggravates renal troubles which pure beer alone simply induces.

That this vile stuff is a fraud is plainly evidenced by the fact that it is nowhere advertised and sold as such. It is made in quantities like a river; but without any flourish of trumpets it disappears, and where does it go? Do you know of an eater who calls for glucose in his food? I don't. The fact is, it makes its way to the dark cellars of our cities, and is there mixed with syrups worth 50 cents a gallon, or about 5 cents per pound in a pure state. Here the American mechanic in Louisiana is robbed directly of the difference between 5 cents and the price of glucose, and the latter can be had in Chicago for 2½ cents. Then the robbery is perpetrated again on the buyer, and the greatest damage is finally done to the eater. If the robbery were done by an Englishman, our tariff would be revised. For one, I feel as willing to be plucked by a man in England as by one in New England.

For years I have not bought a pint of New Orleans molasses or syrup. I want some very much, and it is offered; but its very handsome appearance satisfies me that it is wedded to glucose, and I can't bear that. And right here is where we honey-producers must open our eyes. We have already had rumblings of the trouble. We know very well that the mixer of glucose with honey is in the land; and although he is carefully watched, and honey of undoubted purity can be obtained, still the danger is over us.

What American industry needs is protection from fraud more than from competition. We need a law that will cause glucose to be sold on its merits, and under its own name. If a man sells maple syrup of less than a certain degree of thickness, in this State, or labels his can with letters less than inch high, he is fined; but the mixer of glucose can compound his wares just about as he pleases—at least, he gets rid of an amount that surpasses any mental conception of it.

But just as soon as I begin to think of a law to rectify this matter, I begin to feel wearied; for the most reasonable food laws ever brought before Congress have been killed there in committee session, for the law-makers themselves were elected by the very corporations we ought to fight.

If somebody would give us accurate figures, showing how much labor is displaced annually in the United States by adulterants, it would make very interesting reading.

Who knows but beeswax itself will eventually fall among the list of articles that are so skillfully adulterated that detection will be almost impossible? Imprisonment for life is none too good for a man who adulterates food.

Cincinnati, Ohio.

No. 1.—Bits of Experience, and a Few Questions Suggested by Them.

BY T. I. DUGDALE.

Although still on the sunny side of 40, the writer has had about 20 years of actual practice in the care and management of bees, and can place them among earliest recollections of boyhood when at home on the farm where my father kept a few colonies in a long, open shed facing the south, at the end of the garden.

Of course it is almost needless to add that they were kept in box-hives, which were from 12 to 14 inches square and about 18 inches deep inside, with sticks across the middle to help hold up the combs. The bees were the common blacks—the only race of which anything definite was known here at that time. The only way in which the coveted sweets stored by the bees was secured, was the brimstone pit, and many colonies I have seen destroyed in this way.

Later on came the plan of boring a big hole in the top of the hives and putting big boxes or caps, as they were often called, on the tops of them into which the bees sometimes put some honey, but many more times did not. Driving the bees out into an empty hive and appropriating the contents of the old hive to the family supply, was also tried, and usually resulted disastrously to the bees; owing, no doubt, to the fact that it was not done at a proper time of the season, this plan was soon abandoned entirely.

Some time during the '70's, I think, as will be remembered by at least some of the older readers, we had an unusually severe winter for bees, when it was believed that fully ½ of the colonies in this country died, as they were mostly wintered on the summer stands with no other protection but the hives they were in. My father had some 8 or 10 colonies at that time, but only two succeeded in getting through till spring alive—one colony very strong, the other very weak.

About this time I had become quite interested in the bees, and began to read about all of the little that was then written on the subject, and having secured my fathers' consent to manage them, I concluded to equalize them by exchanging stands with the two hives. As it was early in the spring, the result was that they went to fighting and robbing, and both soon dwindled down to nothing, and the moth-worms completed the job by destroying the combs.

One thing that I was at a loss to account for at that time was that the colony that was so strong in numbers was in an old hive with a crack in one side from top to bottom, large enough for the bees to pass through for nearly its entire length; while all those hives in which the bees died, were sound from top to bottom. I wonder if that crack in that hive did not serve a good purpose as a ventilator in allowing the moisture to pass away from the cluster. And I wonder if cold ever directly kills a colony of bees if all other conditions are just right.

About this time I began to have the impression that perhaps theory and practice might be two entirely different things. I am still a good deal inclined that way. And not to be discouraged by my first attempt, I bought a fine, large swarm of a neighbor who found them, paying $5.00 for them, which was the common price in those times. They filled the hive that season, and stored 10 or 15 pounds in square boxes with glass sides, these being the first I had ever used. I succeeded in wintering my one colony the following winter, and also procured directions and made my first frame hives. Then began the study and actual practice which soon enabled me to fathom at least some of the mysteries which had puzzled me so much before. During the next two years I increased my colonies to 15, by natural swarming, and sold enough honey to pay all expenses.

My father then sold the farm, and in order to dispose of implements, stock, etc., made an auction sale, at which I also sold my bees at an average price of $15.00 per colony. Thus I secured $75.00 in two years from an investment of $5.00. Previous to this time there was not to exceed 50 colonies of bees within a radius of two miles from this place. At this time there is upwards of 200 colonies within the same distance, and I wonder if that may not have some bearing on the question of poor seasons, of which we hear so much of late.

After leaving home I secured a position with Mr. J. H. Nellis, of Canajoharie, N. Y., who was at that time quite extensively engaged in rearing queens and making and dealing in bee-keepers' supplies. Here I first saw the Italian bees, and gained much practical knowledge in the successful management of them. At this time what was known as the "Nellis hive" was brought to the public notice, and I might add that I constructed the first one ever made, from plans gotten out by Mr. Nellis. Also the Hoffman frame was offered to the public for the first time with this hive.

Comb foundation also was in its infancy. The first I ever saw was a medium cell between drone and worker size, made by A. I. Root. Here theory and practice did not seem to agree, as the odd size did not give the desired results. Very soon after this Mr. Nellis purchased a mill of regular worker size, and began the manufacture of foundation.

West Galway, N. Y.

[To be continued.]

"Talking Back" an Important Element in Modern Bee-Literature.

BY F. L. THOMPSON.

It is worth while to give some attention to the methods of acquiring information, as well as to the information itself. Modern education rests on that assumption.

In the December Review, Mr. Hasty has this to say on conventions: "Man is apt to meet instruction as a cabbage-leaf meets rain—shed it all off. But when people meet together for a definite good purpose, when the gathering is properly engineered, and things work just right, a curious and indefinable something comes down and takes possession of all hearts. Enthusiasm and open-mindedness make everything good strike in." This influence, he says, cannot be transferred to print.

True enough. And yet I have often wondered if printed matter might not improve in that direction, so that it would come three or four degrees nearer the inspiring influence of conventions. It is a somewhat narrow view, after all, that when bee-papers contain anything but fresh ideas, once stated, they are printing superfluous matter. Every one has had the experience that the clinching of an idea was as valuable to him as the idea itself, or the refutation of an idea was as valuable as he thought the original one was going to be. This *new* sensation, often repeated, is partly what makes a convention. The *extent* of that repetition cannot be transferred to print, it is true. It would produce an effect something like the constant printing of inferior jokes. However

much we may enjoy the latter in conversation, they somehow fall flat when printed. So, then, there is a limit beyond which print cannot go, in making things lively, and at the same time preserving its standard of value; but has that limit yet been reached? I think not.

The semi-occasional reviews of Mr. Demaree, and the notes and comments on every issue that Dr. Miller made awhile ago, and the occasional back-and-forth talking by other contributors, were read, by me at least, with a peculiar interest, which differed only in degree, but not in kind, from the regular convention feeling. And the final result was that my mind had a clearer perception of some things than would otherwise have been the case. But we cannot depend upon the old stagers to keep up that sort of thing. They have too much else to do. And, besides, we want to know once in awhile what *everybody* thinks about something, as well as the leaders.

The "improvement of bee-literature" movement is, in my opinion, quite as important in this line as any other. We can *now* depend upon the editors (whether we could or not several years ago does not concern us) to keep out most twaddle. It would be asking too much to expect them to keep it all out, for that is an exceedingly difficult matter; and tastes differ, anyway.

If contributors would not only occasionally, but often, tell what they thought of other contributions, either by confirming or criticising, it would be the nearest approach we could make to a convention all the year around. Healthy criticism hurts nobody; it is the diseased, cantankerous article that is worse than none. And confirmation is sometimes just as necessary. It has often been my experience, in reading the bee-papers, that a practical hint was passed unnoticed until attention was called to it from another quarter. Arvada, Colo.

[The American Bee Journal is quite willing that the "continuous-convention idea," approved by Mr. Thompson, shall find a place in its columns. But let all "talking back" be done in a courteous way, and with the intention of adding some real good to the general store—not simply for the sake of finding fault, or just to show ability to "talk back." When properly done, much good will result, just as suggested by Mr. Thompson.—THE EDITOR.]

A Few Home-Made Conveniences.

BY A. F. CROSBY.

I want to tell how I handle my bees from the time they swarm until they are in the cellar. A few years ago, in swarming time, I had 4 swarms come out, and all went together in spite of all that I could do. It was a great perplexity to me. I worked with them nearly all day, got very tired, and I told my wife that I would have some way fixed that would relieve me of such perplexity. I got my supper, started down town, which is about ½ mile away, bought a handcart, the box of which is about 30 by 48 inches. I took out the tailboard, set in a Langstroth hive clear back, with the entrance forward toward the handles. I set up a side board on either side, of ¾ boards, as high as the box against the side boards, with a board nailed on the back end of each at right angles, that goes in tight against the side of the hive clear to the front end, so that the bees cannot get back under the hive. I key it up if necessary, so that the hive cannot move. This leaves the opening in front of the hive about 30x30 inches. Now the hive is all ready, in the cart.

Now when the swarm begins to cluster, as mine generally do, on the lower limbs of a fruit-tree, I run the cart (the opening in front of the hive) under the cluster. If I see another swarm coming, I give the limb two or three shakes, and the queen is down in front of the hive. I take the cart and start for the stand, and by the time I get there the greater part will be in the hive. I set the hive on the stand, and brush the remainder out in front of the hive. The bees that are in the air when I start for the stand will mostly follow up and go into the hive while I am going to the stand. Now, in 10 minutes after they begin to cluster, at most, it's all done. I have had no more trouble with swarms going together.

I want to tell about my wheelbarrow. I made it very light for holding one colony of bees. It is on springs. It stands level when at rest. I put the scales on it, and run it wherever I want to weigh, and I had a good deal of that to do last fall.

I have a railroad for putting the bees into the cellar. It is 8 feet in and 8 feet out of the cellar window. I put on the cart four hives. The cart is also on springs. I run it up to the cellar window, set the hives on the car, which also holds four hives. I run them inside, then go in and put them around. I put in 60 colonies in a few hours last fall without help, with ease. Now, without this I could not do half as much, for I am about 77 years old. I hope some one will be benefitted by my experience. That 86-year-old man mentioned in the Bee Journal awhile ago, would find it much easier to handle his 61 colonies of bees.

Later I may tell about my solar wax-extractor, bee-escapes and honey-room with window to turn the bees out-doors—all my own make, and lots of other improvements. My bees seem to be doing nicely so far (Feb. 7). I am taking on new courage and interest in reading the improved American Bee Journal. I have not much else to do now.

Sheffield, Iowa.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Carrying Out Immature Bees.

A certain colony of my bees have for several days been carrying out a few immature bees, dead. These bees seem to have been capped over a day or two, judging from the size. Is anything wrong, probably? The colony has plenty of honey and workers. I would examine, but they are in a box-hive, and have not yet been transferred. W. L. G.

Forest City, N. C.

ANSWER.—I hardly think there's any serious trouble. It is nothing remarkable to see immature bees carried out, and this is caused sometimes by the depredation of the wax-worm.

Queen-Rearing—Basswood—Unwired Combs.

1. What is the best book on queen-rearing, and by whom published or sold?

2. I have 6 colonies. If they go through the winter can I rear enough queens to sell to pay me to advertise, and also to increase to about 12 colonies, if the season is favorable?

3. Will the basswood thrive and produce honey as far down as southeast Kentucky?

4. Can the extractor be used where frames are not wired, without injuring the combs? J. J. W.

Mayking, Ky.

ANSWERS.—1. Doolittle's "Scientific Queen-Rearing" is, I think, the only work exclusively devoted to that subject, and is to be had from the office of the American Bee Journal.

2. I don't know. Something depends on the season, and still more upon yourself. If you have never reared many queens, I should hardly advise any advertising till after you have had considerable experience. There are a great many queen-breeders, and a new man coming on the field has less chance than those with established reputations. If you have such a season as many bee-keepers had the past year, you'll not be able to double your number without heavy feeding. Now I'm not going to offer you any direct advice, for sometimes that's dangerous in such cases, but if some beginner should ask you whether you advise him to sell queens, just say to him, "You let that sort of thing alone till you know more about rearing good queens."

3. I think it will.

4. Yes, I used them for years before anything was known about wiring. But with new combs unwired you have to be very careful. If I had good unwired combs, I wouldn't discard them, but I wouldn't think of starting any new ones without wiring, whether to be used for extracting or not.

Queen Laying on the Outside of a Comb—How Many Colonies Can be Profitably Kept?

1. Last summer, in one of my old box-hives that has a glass in the back of the hive to look at them, I noticed the queen right inside the glass, and looking closely I saw that she was laying eggs, and the workers taking the eggs into their mouths and disappearing, then took another one without

going away with the first one. Now I would like to know what they did with those eggs, and what was the cause of the queen laying her eggs simply on the outside of the comb and the workers disposing of them in such a mysterious way.

2. I would like to know how many bees I could keep in this locality. There are no basswood trees around here, only a few poplar, some white clover, raspberry, blackberry, and plenty of cherry trees. G. E. U.

Halifax, Pa.

ANSWERS.—1. I'd give a good deal to have seen what you did. It was a very unusual sight, and some would even be inclined to say that you must have been mistaken about it. There has been quite a little discussion as to whether workers ever carried eggs. Some say they do and some say they don't. As to why the queen laid eggs there without depositing them in cells, and what the workers did with the eggs, I can only say I don't know. Possibly the queen had filled all available room, and was exploring on the outside of the combs for more room, and failing to find proper places simply extruded the eggs for her own comfort; and then if I wanted to theorize further, I might say that the workers lugged off the eggs and put them in queen-cells. But the real truth is that I don't know a thing about it.

2. I'm sorry to say that you're second question is about as hard to answer as the first. That "some white clover" is the thing I'd like most to know about. It may mean enough to keep 100 colonies busy, and there may not be enough to keep 10 out of mischief. Again, much depends upon the number of bees about you. If there are only a dozen colonies within two miles, you may have a fine location, and if there are many within the same distance it might be troublesome for a good-sized apiary at your home to store a pound of surplus. Making a guess at what is the usual thing, I should say that you might try increasing till you reached 50 or 75, and then if you saw no diminution for two or three years, you might be safe to increase a little more. But you'll find it an extremely hard thing to settle just how many colonies can be most profitably supported in your field.

What Disease is It?

Suppose a swarm shows foul brood through early summer, and the latter part of the season the brood is all right, in same comb, what is such a disease called? C. V. B.

ANSWER.—I don't know. I think I should call it a mistake. For if it showed foul brood in early summer, I hardly think it would be gone later if nothing was done to it. Chilled brood in early summer might be present, and to a certain extent look like foul brood, but there's a difference of miles between the two.

The Sunny Southland.

CONDUCTED BY

MRS. JENNIE ATCHLEY, BEEVILLE, TEX.

Queen Carried Out by the Bees.

JENNIE ATCHLEY:—I received a queen from a Massachusetts breeder, and introduced her, and afterwards I found her out on the alighting-board, nearly dead. I took her into the house and she came to life, and I returned her to the hive. 1. What caused her to leave the cluster, and expose herself to the cold, the colony being strong and healthy? 2. Will she be worth keeping, providing the accident does not occur again?

North Yakima, Wash. ISAAC HAYS.

Friend Hays, so much depends that I am at a loss to know how to answer. Now, if you had made your colony queenless some days before you introduced the new queen, the bees may have reared a queen, and she hatched at about the time the young queen was carried out by the bees; you returned her, and she got killed, etc., and you likely did not discover it. Or it may have been the other way—the queen you introduced was taken out and the young one saved, etc. It may be that the only queen your bees had was dragged out from some unknown cause. But I am of the opinion that it was one of the first ways mentioned. I would watch this queen and her colony, and if everything works off properly, I think the queen will be all right for this season.

Questions on Bee-Keeping in the South.

JENNIE ATCHLEY:—At what price can land suitable for bee-keeping be bought in your part of Texas? At what price can bees be bought in the spring? What price do you get for comb and extracted honey? Do you winter your bees without any protection whatever? What are your main sources for honey—what plants or trees?

I intend to sell my bees next fall, and go to some place and make a speciality of bee-keeping. The coming season will be my twelfth summer in bee-keeping. I intend to locate somewhere where bees will need no winter protection. Here in Wisconsin we have them in the cellar nearly five months, and if the weather is unfavorable in the spring we seldom get them strong enough for our white honey crop, which starts the latter part of June. A. L.

Calumet Harbor, Wis.

Friend L., I will answer your questions as accurately as I can: Land suitable for a *good* bee-ranch can be bought for $5.00 per acre. Bees in the spring, in box-hives, are $2.50 per colony; in latest improved hives, $5.00 per colony is about the price where a person will take them at the bee-yards. We get about 6 cents per pound for extracted honey, and 8 cents for bulk comb honey. Nice section honey brings 12½ cents per pound. Yes, we winter our bees without any protection, more than a common single-walled hive. Our main sources for honey are cat's-claw, horsemint, mesquite and chaparal.

Bees Stored Bitter Honey.

My bees are wintering very well. They have plenty of stores to carry them through until spring. They filled the brood-chamber with nice linden honey, and about the close of the flow I put the supers on. In the fall they filled them with bitterweed honey, nearly as bitter as quinine. What is such honey fit for? How can I keep them from "playing off" on me again? S. P. BREWER.

Edom, Tex., Feb. 14.

Friend Brewer, I think your bitter honey will be excellent to winter bees on. I used to get, some seasons, in north and middle Texas, quite a lot of bitterweed honey, and I found this bitter honey as wholesome as any for bees, but not good to eat. I would keep the bees from fooling me next time by giving them room in the brood-nest to store it, and keep the supers off, unless they have full-sized frames; in that case, you can use the honey in feeding or stimulating in the spring. It would tickle me if I had about 40,000 pounds of that bitter honey this spring to make bees out off. If you get this honey every year, prepare to have it stored for your bees in winter, and take off the good honey.

Exchanging Larvæ in Queen-Rearing—Dipping Cell-Cups.

Jennie Atchley speaks, in her lessons on profitable bee-keeping, about exchanging the egg or larva in the queen-cells when the bees are preparing to swarm. Now I wish she would answer these questions: Could any one exchange the larva after the swarm has issued, as they almost always leave a number of cells uncapped? Could the capped cells be opened and the larva exchanged? I think Mrs. Atchley forgot to tell us how to dip queen-cells.

Did any one ever have the nameless bee-disease start in a colony of black or native bees, or is it confined to the Italians?

Clayton, Mich. C. A. HUFF.

Friend Huff, in my lessons on queen-rearing, I am sorry I left out how to dip cells, and also that I did not make it more plain about grafting into natural cells. Well, to dip cell-cups I use a little stick about 4 inches long, one end made to fit inside a natural queen-cell, leaving a small part on the bottom of the stick just right to make a place in a cell-cup large enough to take in the cocoon of a cell, or the bottom of the cocoon, and move the cocoon, little larva and all, right into the bottom of the cell-cup.

To dip the cell cups I have a cup of melted wax, and at first make a short dip, and dip five or six times, going a little deeper every time until the cell-cup is about ¾ of an inch long. The best way to get all cell-cups of right length is to have a mark on the cell-stick where you wish the cap to come to, and dipping five or six times, first shallow, then deeper, etc. This gives the cell-cup a strong base, and the top a thin edge. Wet the stick in water before you dip the cups, each time, and when done, take hold of the cell-cup with one hand and

twirl the stick gently with the other, and it will come off easy.

It will not do to wait until the swarm issues to graft cells—it must be done while the larva is not over a day old, then the feed will suit the day old larva used in grafting. Cells could be torn open and shaved down after being sealed—take the larva, jelly and all, and place new jelly in the cup, and your larva would work. But I think it too slow.

I do not know that I have seen any reports of black bees having paralysis. But I supposed all kinds of bees are likely to have paralysis at times. I do not think the disease is confined to Italians alone. I have not seen a case of bee-paralysis in south Texas yet, that I know of.

Moisture, Not Cold, Kills Bees.

MRS. ATCHLEY:—I find my letter to you, on page 30 of the Bee Journal, all right, but it brought to my mind one fact that I will briefly state to you.

Some 10 years or so ago, while testing the matter of winter protection, I found myself with a small colony of bees and a nice queen that I desired to save. The thought came to me that this would be a good chance to test the matter of wintering, to see how a small colony would go through. For a hive I had a 5-frame ordinary Langstroth hive, made of ½-inch thick pine lumber. The bees fairly covered three Langstroth frames, so I put a frame of comb on the sides of the hive, and the three combs with bees and queen in the center, covering them with a half-story top for cover, filled with leaves, giving full entrance the whole with of the hive. The only other protection was a thick hedge on the north side of the hive.

The winter proved more than ordinarily severe, but this colony came through in good condition, and when opened in March the cells were nearly all filled with brood. I will say that I placed a substitute for Hill's device over the tops of the frames, so that the bees could travel from one frame to another over the whole top of the hive.

This doesn't prove a proposition, but is a piece of evidence. I have many such pieces, and putting them all together, makes proof that satisfies my mind that cold of itself doesn't kill our bees; but that excess of moisture does, by freezing, to be sure; but in such case the cold is secondarily the cause; and I believe if we so ventilate as to get rid of moisture, our bees will stand very severe cold weather.

I am not pig-headed in my ideas. I am constantly looking for more light. I give my impressions drawn from actual experiments, and know no better guide. J. E. POND.

North Attleboro, Mass.

Friend Pond, your letter brings to mind the very points that I have many times tried to convince myself of, that it was not the cold itself that killed the bees, but the poison, I might put it, or moisture arising or accumulating, and no way to get out above. I for one am glad to get the evidence you bring out, and I think that when we have a fair sized colony of bees, with the proper ventilation, they will stand zero weather a long time.

I am glad to hear you say that you are not so set in your ideas that nothing will turn you. That is what we all ought to do—write our experience more and theories less, and be willing to "give in" when wrong.

A B C of Bee-Culture.—This is the fine cyclopedia of bee-keeping by A. I. Root, containing 400 pages and nearly 200 engravings. The regular price is $1.25, postpaid, but until April 20 we make the following very liberal clubbing offers on this book: The American Bee Journal one year and the "A B C" bound in cloth—both for only $1.80; or the parchment cover (very heavy paper) "A B C" and the American Bee Journal one year—both together only $1.50. Remember, April 20 is the limit on these offers. Better order at once if you want a copy of this excellent bee-book.

Only One Cent a Copy for copies of the American Bee Journal before Jan. 1, 1895. We have them running back for about 10 years. But you must let us select them, as we cannot furnish them in regular order, and probably not any particular copies. Just send us as many one-cent stamps as you may want old copies, and we will mail them to you.

Back Numbers for 1895 we can furnish to new subscribers until further notice, if they will let us know when subscribing. We will begin the subscription Jan. 1, 1895, if you say so when sending $1.00 for a year's subscription.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Go Slow.—"Failures in bee-keeping are very often due to the fact that too many are in such haste to go into the business, instead of growing into it."—Editorial in Nebraska Bee-Keeper.

I have noticed the same thing myself. The desire to get bees seems to come on some people like a mania, and though they know nothing about them, they are not content with one or two colonies, but must have a large apiary the first year. I think of one man now, who, being induced to try his hand at bee-keeping by hearing a speech which I made at a farmer's institute last fall, rushed out and bought 20 or more colonies in a few days. He had not had any experience with bees, and, notwithstanding I had advised him to begin with one or two colonies and increase as he learned, he was not content until he had 20 or more. Now, of course, I do not know how he will come out, but in nine cases out of ten, such people are bound to fail. They have but little knowledge of the economy of a bee-hive, and no practical experience, and they themselves would not think of trying any other industry with so little fitness for it. Bees can be left to keep themselves with but little knowledge, but if their owner intends to *keep the bees* that they may help keep him, he must know something about them. Many things about bees can only be learned by experience, therefore it is better, as Friend Stilson says, to "grow into bee-keeping."

Candy and Dysentery.—"The fact that cakes of candy were given to all known to be in need buoys up the hope that all will be well; but six weeks' continuous confinement, with no sign of a break in the weather at time of writing, engenders fears of dysentery in the weaker colonies."—W. Woodley, in British Bee Journal.

It seems that our friends over the water have caught onto the idea of sugar-cakes, but they call it candy, and, as per a quotation in a former note, think it should be soft. I asked why soft then, and now I want to ask, why fear dysentery from six weeks' confinement? I am inclined to think that it is not the confinement that causes disease, but bad food. I feel like saying again, how about the bees in Norway and Sweden that are confined twice six weeks, or more? One would think they would all die of dysentery, but do they? I hope Mr. Woodley will report later how these bees come through the winter.

Why? Pray Tell:—"There will seldom be any use for a queen-excluder on a ten-frame hive in running for extracted honey, while it almost becomes necessary to have a queen-excluder in an eight-frame hive when running for extracted honey."—J. W. Rouse, in Progressive Bee-Keeper.

I am very much at a loss to know why a queen-excluder would not be needed in one case as much as the other. It has been my experience that the queen very soon finds her way to the top of the hive when the hive is two story and filled with brood-combs; and I am thoroughly convinced that she will go there, if not prevented, just as quickly in a ten-frame hive as she will in an eight. I should not say "it almost becomes necessary" to have a queen-excluder, but it is *absolutely necessary* for either an eight or ten frame hive, if one wants to get rid of the nuisance of having brood in the combs from which he is extracting. I prefer honey to *larva pap*. There is no doubt, however, in my mind, but what a ten-frame is better than an eight for extracted honey, and I should not object to a twelve-frame, if I were running an apiary exclusively for the production of extracted honey.

Raising Honey.—"How to Raise Extracted Honey."—Title of a chapter in "Advanced Bee-Keeping."

Friend H. must have been in the dairy business. I have read of raising calves, of raising sheep, of raising horses, and it is said that some people have been known to raise the D—l, but I think it would be better to *produce* honey. But since I come to think of it, there is a "critter" known as a "Raising Bee," and perhaps he is the fellow that "raises" honey. They had 'em when I was a boy, but I did not know much about bees then, and cannot tell how much "honey" they "raised."

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REV. EMERSON T. ABBOTT	"NOTES AND COMMENTS."

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Editorial Budget.

Honey-Dew Honey.—The latter part of March I received a small sample of honey-dew honey, gathered in Crawford county, Ark. It was kindly sent by Mr. A. L. Reed, of Winslow, Ark. It is quite thick, and (to me) in color and flavor it is something like the heart's-ease honey of the North. Personally, I do not dislike the flavor, though it is quite probable that in the Chicago market it would find very little sale. Mr. Reed says of it: "The bees gather this in great quantities, and it finds ready market."

Keeping Extracted Honey Liquid.—An exchange says if extracted honey is closed up tight after it has become thoroughly ripened, it will keep indefinitely anywhere. If it is desired to keep it in the liquid form, then upon the approach of cold weather heat it to 150°, Fahr., or a little above, and seal it up while hot in cans or proper receptacles, and it will keep indefinitely anywhere until opened and exposed to the cold again.

Importance of Bees in the Orchard.—The Maryland Farmer says that in a series of experiments at the Oregon United States Experiment Station, in the pollination of the peach, the trees were forced under glass to bloom in November. A colony of bees was placed in the house, when the trees commenced to bloom. A heavy fog prevailed for 15 days, and although the flowers were constantly opening, not a bee showed itself. During the night of the 15th the fog lifted, and the next morning was bright and clear, causing the pollen to burst. Then the bees came from the hive and kept up their work for eight or nine days. The result was that not a single peach was observed to drop at the stoning season. So great was the amount of fruit on the trees that it was necessary to thin it.

One tree in the house was securely protected, so that the bees could not gain access to it, and all of the fruit dropped at the stoning period.

Mr. George Coote, horticulturist of the station, says that these facts show the valne of bees to the horticulturist, and that no fruit-grower should be without them.

The Northwestern and Illinois State.—Mr. S. N. Black, the 1st Vice-President of the Illinois State Bee-Keepers' Association, writes as follows concerning the organizing of another Northwestern bee-keepers' association:

MR. EDITOR:—Referring to Mr. W. Z. Hutchinson's letter on page 204, I would say that if the interests of honey-producers will be advanced, go on and re-organize the "Northwestern," or call it by any name advisable.

I think I made the motion to accept the offer of the Northwestern to merge their organization into the Illinois State Bee-Keepers' Association. It was hoped that a stronger association would thus be formed. The Illinois Bee-Keepers' Association had, by strenuous efforts, secured an appropriation for publishing their proceedings, and this was one reason for the desire of the union of the two associations. Also, at that time there was talk of the State association making a display at the Columbian Exposition—which they did successfully.

During last year bees stored no honey in this part of the State, and the failure was pretty general throughout the State, so far as I can learn, and from correspondence and talk with bee-keepers, it was thought best by the executive committee to call no session of the Illinois bee-keepers' association at Chicago last fall.

A Bill has been offered in the legislature at the present term, for an appropriation for publishing the reports of the State association, and has, I believe, passed the Senate, but it is thought doubtful if it passes the house—a large portion of the opposition coming (I am told) from about Chicago.

I do not think that the union has been of benefit to the Illinois State Association—there have been but few of those who were members of the Northwestern seeming to take much interest in the united association. Whether the re-organization of the Northwestern will be a detriment to the Illinois State Association is another question; nor do I suppose those who wish the success of the Northwestern will stop long to consider. If it comes to the test, it will be a case of "the survival of the fittest."

I *think* the State association will most likely hold its annual meetings in the fall or winter. S. N. BLACK.
Clayton, Ill.

The following expression comes from Canada:

I desire to second Mr. Hutchinson's plea for a revival of the Northwestern. If held the end of September, some of us Canadian bee-keepers would get over to it, as we always have a cheap excursion to Chicago about Sept. 24. I can go from here to Chicago and return at that date for only $10.
Guelph, Ont. WM. F. CLARKE.

Mr. R. Miller, of Compton, Ill., says in a letter dated March 30: "Yes, by all means have a yearly bee-keepers' convention in Chicago every fall."

Personally (and I think all others will agree) I am not in favor of doing anything that will in any way injure the usefulness or prosperity of the Illinois State Association. But it is thought by some that the Northwestern association occupied a special field—one that no State organization, or other, by whatever name, could possibly equal.

New York Lawmakers should have their salaries raised at once, if the following is a fair specimen of the hard work they have to do in the legislature:

A familiar Bill in past sessions at Albany makes it a felony for one man to entice away his neighbor's bees. It was introduced in all seriousness, but was killed by a Tammany leader who amended it twice. First, that each bee should wear a collar, and, second, that it should have the name and address of its owner stamped on its business end for identification.

Why not send good bee-keepers to help make the laws, and thus save the rest of the "would-be lawmakers" from making themselves a laughing-stock? Some of them haven't enough "*business* end" for "identification."

Foreign Subscribers will please remember that the subscription price of the American Bee Journal to them is $1.50 a year instead of $1.00. All places outside of the United States, Canada, and Mexico are "foreign," and the extra 50 cents is to cover the extra postage required. Please remember this, my foreign brother.

Among the Bee-Papers

Conducted by "GLEANER."

SIZE OF BROOD-NEST.

Of late there has been much discussion in Gleanings as to the size of brood-nest, the general drift being toward larger than many had been using. Now come Schumack Bros., in Australian Bee Bulletin, saying: "We use frames 16 inches long and 9 inches deep for the brood-nest, and six of them, with a good queen, will be found all that's required to keep a hive well stocked with bees." What will be said to that by those who want 10 or 12 frames an eighth larger in size?

GETTING COMBS BUILT DOWN TO THE BOTTOM-BAR.

Geo. Colbourne lets the bees build their combs down to within a few inches of the bottom-bar, then puts them in an upper story to be completed, and in ninety-nine cases in a hundred they will finish them down to the bottom-bar; whereas, if left below till rounded off with a space between the comb and bottom-bar, no change would be made in that space when put above.—Australian Bee-Bulletin.

NEW BEE-DISEASE IN AUSTRALIA.

W. S. Pender describes in the Australian Bee-Bulletin a new bee-disease, which, like foul brood, makes the larvæ turn brown, with cappings dark, slightly sunken, and often perforated; but the larvæ retain their shape until dried up to a black scale, showing no signs of ropiness. The disease attacks unemerged fully developed bees in the cells, which dry up retaining perfect shape. No stench, not even the stench of decaying bees. Let us hope the disease may not take in this continent in its travels.

MICHIGAN'S EXPERIMENTAL APIARY.

Experimenter Taylor reports in Review that during the past year he tried Conser's non-swarming hive and Langdon's non-swarmer, but with no definite conclusions, partly owing to the bad season. Tried two colonies of the "so-called" five-banded bees, and finds no fault with their working qualities, so far as he could judge in so bad a season, but doesn't boast of their gentleness, and one colony were desperate robbers.

PROFITS FROM ALSIKE CLOVER.

Thirty acres of Alsike are thus reported in Gleanings by Frank Coverdale: 90 bushels seed, $540; 40 tons good hay, $240; $250 worth of honey that he wouldn't have had but for Alsike; making more than $1,000 for the 30 acres, to say nothing of the aftergrowth and the fine condition in which the land is left for future crops.

DRONES FROM VIRGIN QUEENS.

Mr. Wells, quoted on page 189, decides they are bad, because his queens were not fecundated "until natural drones commenced to fly," although drones from virgin queens were flying before. Such drones may be worthless, but the proof in this case would be more satisfactory if he had shown that his queens would have been fertilized at an earlier date if normal drones had been flying. In other words, would any other drones have been better at that time?

Canadian Beedom.

Conducted by "BEE-MASTER."

That Ontario Foul Brood Report.

On page 174 is a long article from Mr. Clarke on my "Foul Brood Report." I see that Mr. Clarke has kept about as far from the real facts of what led to the burning of the three foul-broody colonies in his apiary, as it was ever possible for any man to do. I also see that he has made several statements that are not truthful. In the last few years I have examined hundreds of apiaries in the province of Ontario, and got the foul-broody colonies cured by an army of men, and I am very much pleased to say that all of my dealings with everyone has ended in the most pleasant way, with the exception of Mr. W. F. Clarke and two other men that did not, and would not, do their duty; and then I had to force the law with them for the public good.

In 1892 I burned 3 foul-broody colonies of bees for a man that I could not get to do his duty. The next time I went back to see if the disease was breaking out in any of his other colonies, he would not let me into his bee-yard. I went at once to the police magistrate in Stratford, and after he read the Foul Brood Act, he wanted me to have the man brought before him and fined for not letting me into his bee-yard to examine his colonies of bees, but I did not want to be hard on the man, and refused to do so. The magistrate said that I was the sole judge, and that the Act gave me the power to burn the diseased hives of bees. He then sent a constable with me and told him, "If that man interferes with the inspector while he is burning the diseased colonies of bees, take him at once." The man had cleared out before I returned with the constable, and I then examined his colonies and found them all right.

In 1893 I burned 15 hives with bees for another man that would not even try to cure his foul-broody colonies. I had written to him and warned him that I would have to burn his diseased colonies if he did not cure them, but it was all no use; he took legal advice, and was determined to prevent me from burning his foul-broody colonies. I heard of it and went to the police magistrate in Strathroy for help to force the law for the public good. As soon as the police magistrate read the Act, he said that I had the power to burn every diseased hive of bees. The magistrate then sent a policeman with me to the diseased apiary, and he kept two men back, while I piled up 15 colonies that were in a horrid state with foul brood and burned them.

I always explain very fully to every man that has foul-broody colonies of bees, how to cure them, and then give him every possible chance to do so, but when he will not cure, and is so careless and indifferent about it that he doesn't care whose apiary would get ruined by his diseased colonies, then there is nothing left for me but to strictly force the law for the public good, by burning every one of his foul-broody colonies. Mr. Clarke knows just as well as I do that I am the sole judge, and have the power to burn, but if he had any doubts on this point he will now see that I am in the right when he reads the rulings on it, of the two police magistrates.

Before 1891, Mr. Clarke sold the balance of his old stock of bees and part of his old combs, and of course was practically out of bee-keeping after that until he bought a new stock of bees. One man at Elora, who bought 10 colonies of Mr. Clarke's old stock, found them very bad with foul brood when he examined them. He then burned up the whole 10 foul-broody colonies, and told other men about the diseased stock Mr. Clarke sold to him. Mr. Clarke had still some of his old stock of combs left, so he went to Mr. Tovall, in Guelph, who had a large apiary, and was an old man, and very poor. He urged Mr. Tovall to buy *his old combs which had a lot of dead brood in them.* Mr. Tovall refused to buy them at first, saying that he did not like the looks of them. Mr. Clarke then said that he would sell them cheap, and said if he would put swarms on them, that the bees would soon clean them out. Mr. Tovall bought them, and he told me that the Rev. Clarke was the cause of all his trouble, as he had sold him the combs that started the foul brood in his apiary.

In 1891 Mr. Clarke bought a new stock of bees, and started bee-keeping again. Then I had to go to his apiary, and examined every one of his colonies to see if they were free from foul brood. I made a thorough examination of every colony, and found them free from disease. In the same locality I found a very badly diseased colony, owned by a lawyer; I burned it at once, so as to prevent Mr. Clarke's colonies from getting foul brood from it. Mr. Clarke's bees were gathering honey then, but he said that when the season closed robbing would set in, as there was an apiary a mile from there. Mr. Clark told me then that he was sure that Tovall's bees had foul brood, and wanted me to go and examine his apiary at once. As I intended to go through Guelph soon after that, I did not go just then to Tovall's apiary, but took the train for another diseased locality. I received a letter in a few days after that from Mr. Clarke, demanding me to come on to Guelph at once, and look after Tovall's apiary. I went, and found his apiary of 80 colonies very badly diseased with foul brood. I asked Mr. Tovall to kill off a few of the very worst of his foul-broody colonies, and make wax of the combs, and then to put the rest of his time in curing his other diseased colonies. Mr. Tovall went to work like a man, and did every thing I told him, so as to get his diseased apiary cured, which he was depending upon very much. While poor, old Mr. Tovall was working very hard curing his apiary, I got another letter from Mr. Clarke, to come again and look after Tovall. I went again to Mr. Tovall's apiary, and saw that for a man of his years he had done wonders. Mr. Tovall then told me all about how he had gotten foul brood from combs that the Rev. Clarke sold to him. Mr. Tovall made a grand

cure of his large apiary, and I was very much pleased with the way he did his duty. Mr. Clarke says that he knew that the apiary of 80 colonies had the disease badly, for he could smell it from the sidewalk. I don't know that he could smell it from the sidewalk, but I do know that he has been blamed for selling the combs to the owner of it, that gave it foul brood.

Mr. Clarke says that during the following summer (meaning 1892) he had notified me that the disease had appeared in his apiary. I positively declare that he did not do anything of the kind. He wanted Mr. Gemmill and me in his apiary on a certain day when he was going to have the students there from the Agricultural College. Mr. Gemmill and I got there before the students did. We examined one nice colony of bees that Mr. Clarke thought a good deal of. I spotted one cell of capped brood that did not look right—it had no "pin-hole" in the capping, but the capping of the cell was sunk in a little. I pointed at it, and said to Mr. Gemmill, "This cell doesn't look right." I then uncapped it, and Mr. Gemmill shouted "Foul brood!" as soon as he saw the foul matter. "Yes," I said, "it is genuine foul brood." That colony had only a few foul cells.

I then went to the south side of his apiary, and examined his other colonies, and found three or four with foul brood; two of them had the disease pretty badly. This was early in 1892.

I then warned Mr. Clarke well, to go to work in the honey season (which was about starting), and cure his 4 or 5 diseased colonies. I explained to him very fully how easily he could cure them, and as it was to Mr. Clarke's interest to do so, I fully expected him to go to work and cure his few diseased colonies. When I went back in the fall to see if Mr. Clarke had cured the 4 or 5 foul-broody colonies, I found that he had never done one thing that I had told him to do, and that things had gone from bad to worse, and every one of his colonies had gotten into the most rotten mess with foul brood for the time, of any that I ever saw. Mr. Clarke must have been using some old foul-broody combs, or done something terrible to get all of his colonies into such a horrid state with foul brood, in that time.

If Mr. Clarke's apiary had been near any other, I would have burned every one of his diseased colonies in the fall, when I went back and found them not cured. Mr. Clarke's colonies were the only ones in that locality that had foul brood then, *and they did not get it from any bees there.*

Mr. Clarke says that he was trying the phenol treatment, and that I wished him to become convinced that it was no good, so let him go on with it. I positively declare that I never did anything of the kind, and did not know until the fall that he had tried it. So Mr. Clarke should not form any *untruthful excuses* for not curing his diseased colonies by my methods of treatment, which I never consented to have set aside for him or any one else.

I offered that fall (1892) to go to Mr. Clarke's and cure one of his worst colonies at one stroke with combs of sealed honey, which I would furnish him free of cost. I offered to do that on condition that Mr. Clarke was to take the colony out of his diseased apiary, and bring it up to his home to be treated there, where it would be away from the disease. Mr. Clarke promised me faithfully to do so. I then wrote to Mr. Gemmill to express 6 combs of *sealed* honey to Mr. Clarke, and I would mail him $6.00 for them. Mr. Gemmill did the best he could, and sent a Heddon half-story full of very pretty combs. He also wrote me when he would send the combs! I went from my home to Guelph—about 55 miles—and was there when the train arrived with the combs of honey from Mr. Gemmill. And so was Mr. Clarke. Then I found that Mr. Clarke was not a man of his word. He would not stand by his promise and bring the colony up to his home to be treated where it would be away from his other diseased colonies. I felt pretty blue over that, as I knew the risk was too great to depend upon curing one colony right among his other colonies that were rotten with foul brood.

But as he was bound to have the colony cured right among his diseased ones, I took the Heddon half story then, and away we went to his apiary. I examined the combs very closely in the Heddon half story that Mr. Gemmill sent, before I put Mr. Clarke's bees on them, and found some cells at the bottom of the combs not sealed, and a few empty cells. I then said to Mr. Clarke that if brood-rearing was started in the very few empty cells at the bottom of the combs before the bees consumed the honey that they took with them from the old combs, that some of it would be fed to the larvæ and then the disease would break out again. The queen could have been caged among the nice sound combs that Mr. Gemmill sent, until the bees consumed all the diseased honey that they took with them from the old combs. But I did not cage the queen, as I expected that colony to get the disease in the spring by robbing at some of his other very foul-broody colonies. I never would have bought those combs and gone all the way to Guelph, if I had known that Mr. Clarke was going to break his promise, and would not have the test made up at his home, away from the disease, but would be determined when he got me there to have the test made right among some of the worst cases of foul brood that I ever saw.

I went back in the following spring (1893), when the robbing season was about over, and examined the combs in the Heddon half story, which I put the bees from the diseased colony into the fall before, and I found only 3 cells of foul brood in it, and these might have been caused by the bees robbing at some of his diseased colonies. I then cut out the piece of comb that had the 3 diseased cells, and said to Mr. Clarke that I would make a perfect cure yet, with these combs that Mr. Gemmill sent, if he would carry out my orders with that colony. He said, "O yes, I will."

I told him then that I would buy a good, strong colony from Mr. Emigh, and have it expressed to him. I explained to him what he was to do with the bees from Mr. Emigh, when they came, and for fear of any mistakes being made, I put it in writing, telling him to cut all the brood and eggs out of the colony that we were treating, and then cage the queen for several days, and as soon as Mr. Emigh's colony arrived, to destroy its queen and then put all of its bees into the one we were treating, so that we would succeed in getting a good cure made, after all, from the combs that Mr. Gemmill sent. I also wrote Mr. Emigh a long letter, telling him everything about the whole business.

When Mr. Clarke got the colony from Mr. Emigh, he divided its bees up and put them in a dozen of his colonies that were dying with foul brood, and then told Mr. Emigh's son, at the College, that it was a fine, strong colony of bees that his father had sent him, and that he had strengthened up a dozen of his colonies with it, by putting all its bees into them. Mr. Clarke wrote me then that he put the bees all into the colony that we were treating. I did not know for some time after that, that Mr. Clarke had taken the bees that I paid for to be used for a test case, and put them into his dying colonies.

On May 22, 1893, I wrote to Mr. Clarke that if he would hurry up and get his new frames and comb foundation, that I would go to his place and cure his apiary myself, early in the honey season. I also wrote telling him that I had written to the Myers brothers to let him have his supplies as cheap as they could when he sent them his order. Mr. Clarke never answered my letter until June 23, and then he was not ready, and hadn't gotten the frames or foundation. I then made up my mind not to bother any more with Mr. Clarke, but to help all I could in other places where the people were very anxious to have me come and show them how to cure their diseased apiaries. Mr. Clarke had the disease in his apiary in 1892, 1893, and 1894, and then I had to burn his colonies for the public good, when I could not get him to do his duty.

I mailed Mr. Gemmill $6.00 for the Heddon half story of combs that he expressed to Mr. Clarke. Mr. Gemmill did not want to charge me one cent, and after that he wanted to give me back the money, which I would not accept, as I always stand by what I offer.

Mr. Emigh sold me a great colony of bees for $5.00, which was very cheap. He did it to oblige me. I spent $11.00 on Mr. Clarke's apiary, and I can truthfully say that I never was so deceived or humbugged by any man in my life, as I have been by Mr. W. F. Clarke. That colony that I examined on the College grounds did have foul brood, and I can prove it, and I believe that Mr. Clarke himself admitted to another man that it had the disease.

Mr. Clarke wonders if I can explain who took combs out of one of his colonies and piled them up. I cannot, and Mr. Clarke knows that as I live over 50 miles from Guelph, it would be impossible for me to know. But I will say this, that if any person did as he says, such conduct cannot be too strongly condemned. I don't care how unpopular any man may be, no person should destroy one cent's worth of his stuff.

WM. MCEVOY, *Foul Brood Inspector.*

Woodburn, Ont., Canada, March 25, 1895.

[As both Mr. Clarke and Mr. McEvoy have now been permitted to tell their stories, the matter will end right here, so far as the American Bee Journal is concerned. There are too many practical bee-contributions on my desk now, awaiting publication, to use further space in these columns on personal controversies, a continuance of which are always useless, and extremely offensive to the majority of readers.—THE EDITOR.]

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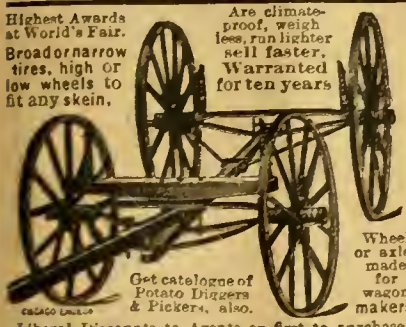

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General Items.

Cause or Source of Honey-Dew Honey

Since noticing Messrs. Stanley & Son's defense of honey-dew honey, I will come to the front again with my question that failed to be answered some time ago, viz.: Of what is honey-dew honey made? and from where does it come? I hope bee-keepers will rally to this question, and give us their ideas of this much-abused article. I shall first look out for Jennie Atchley's answer—maybe because she is sorter home folks. As the "Old Reliable" covers almost all matters pertaining to bees and honey, let her cover this matter of honey-dew honey. A. H. WEBSTER.

Walnut Springs, Tex.

Bee-Keeping in Northern Wisconsin.

To-day is clear and sunshiny, with a cold north wind blowing. The mercury stood at 2 degrees above zero this morning.

Bees were put in Nov. 5, and have wintered well so far, but I am anxious for a warm day so they can be taken from the cellar and have a flight. I would then return them to the cellar until warm weather came for good.

The intensely cold weather of the first ten days of February did not seem to injure the bees, although the average for the ten days was 32 degrees below zero. The temperature of the cellar was about 40 degrees.

Bee-men will soon be buying their summer supplies. Let me warn them against buying thin hives. I bought a lot of hives made of ⅞-inch pine lumber, and it was hard to keep them warm enough to allow brood-rearing in the spring. Again in the fall, although I got my bees in early, the water was running from the bottom-boards, and the walls were wet; while the hives made of inch stuff were perfectly dry. The walls are so thin and cold that the moisture condenses, thus keeping the combs and bees damp.

Bees in this locality cannot usually be taken out until about April 5 to 10. Honey retails at a shilling. Times seem to be too close for people to spare money for what they consider honey to be—a luxury.

ED. GOODRICH.

Cylon, Wis., March 8.

Back from California.

FRIEND YORK:—Once more I tread my native heath, and thank God for safe deliverance from a journey of nearly 5,000 miles. I by no means regret the trip, but on the other hand rejoice, and can truthfully say it was the most enjoyable event of my life.

Among the most interesting features of the journey were the city of Denver and the snow-capped Rocky Mountains in the distance. Pike's Peak prominent among the range; beautiful Colorado Springs, and Gateway to the Garden of the Gods; historic Pueblo, and the wondrous "Grand Canyon of the Arkansas." This wondrous freak of nature is certainly one of the greatest of its kind in the known world, and lucky are those who can have the opportunity of gazing upon these almost perpendicular walls and rugged acclivities towering in their awful grandeur to their dizzy heights above.

I also passed through Leadville, celebrated as the city above the clouds, being nearly 11,000 feet above sea level. The atmosphere at this point seemed very rare. We also passed through Salt Lake City and valley, and the valley of the Humboldt, but as snow was falling rapidly, we could see but little of interest. At Truckee, in the Sierra Nevada range, I encountered 8 feet of snow on a level, and from thence there was said to be 45 miles of snow-sheds, but as these points were passed after night, I was unable to see anything of interest to report.

At 5:30 the following morning we were in Sacramento, the capital of California. Here could be seen beautiful green lawns and semi-tropical plants, being quite a contrast from the scenes of but a few hours previous. The following morning at 7:30 I gazed upon the beautiful mecca of Southern California—Los Angeles. It would be inopportune to go into detail of my trip, as so much has been said previously about this beautiful country, yet I have thought since my return that the half has never been told.

I must, however, acknowledge the compliment of being made an honorary member of the California State Bee-Keepers' Association while in Los Angeles. I look upon it as the extension of the right hand of fellowship to the State I have the honor of representing, more than any personal achievements on my own part. The California State Bee-Keepers' Association is a wide-awake society, and has a galaxy of able and hard-working members at the head, who are alive to the best interests of the pursuit. J. M. HAMBAUGH.

Mt. Sterling, Ill., March 4.

Death of a Devoted Wife.

It is with sadness that I write in relation to our bereavement—the sudden death of my wife, who has been a compainion for 37 years, a devoted Christian, a mother of seven children, four of whom have gone on before her. She died March 14, at the age of 62 years. Her death was very sudden and unexpected. La grippe, together with ulceration of the lungs, was the cause.

Rolla, Mo. WM. ROBSON.

Wintering—Depth of Frames.

There is not one colony in 20 of the farmer's bees in this county now alive. Those who make it a specialty, and cellar their bees, and who supplied them with enough stores last fall, have their bees in good condition.

In recent articles in the American Bee Journal, in reference to depth of frames, the most serious objection to the 11¼-inch frame has not been noted. The objection is this: It breaks and melts down easily. Four horizontal wires won't prevent this. Were it not for this, it far excels the 9¼-inch frame. Bees winter better on them, and are stronger colonies than on the 9¼.

W. C. FRAZIER.

Atlantic, Iowa, March 19.

Fire Stricken District in 1894.

Apiculture in this section of the country did not flourish during the season of 1894 according to expectations, but wide-awake bee-keepers who watch the elements as well as the condition of their apiary, did realize a fair yield of honey after all. The opening of the season was not very favorable for bees, the month of April being backward and cold. May was intermixed with cool and warmer days, and cold wind. Bees did not breed very strong until the forepart of June. During that month the season advanced very fast, to such an extent that basswood bloom developed at least a week earlier than usual, with a plentiful flow of nectar, which lasted over two weeks, not so overflowing, but steady right along. White clover did not yield much to build up colonies in a natural way.

At the close of the basswood season our bees had a season of rest, because we had no rain from May (to speak of) until September. During the month of August, in this section of country, the suffering that both man and beast, and our bees, had to to undergo no one can tell, nor never has been told, not even through the columns of our "old reliable" American Bee Journal. Strange to think not one bee-keeper ever hinted at the fate which stared in our faces during the last days of August and the first days of September, threatening destruction to life and everything around us. For weeks the black smoke was so thick and dense that our vision was prevented to view an object hardly ½ mile off, caused by

forest fires around us. Nothing green could be seen neither in field nor meadow. Our bees, accustomed to early morning flight in search of nectar, returned empty and mournful to their homes, clustering around the entrauces, informing their keeper that something was wrong—and so it was.

The first days of September proved to be memorable days to many as long as life lasts. Many towns, both in Wisconsin and Minnesota, were utterly consumed, with a passenger train, and the human lives lost and property has been told by the secular press, and among this property were also many bees, that had been taken with emigrants to such sections where pasture for bees was plenty. I have no knowledge of any large apiaries, but facts are such that bees were kept by families in said sections in smaller number of colonies, and all was consumed by devouring flames, 50 to 60 feet high in places, driven by a strong wind, causing swift destruction; and very strange, not the least mention was made by any bee-keeper in the Bee Journal. And this destruction-bringing element would have consumed and laid waste a much larger territory in its onward march, had not Providence sent a heavy rain to extinguish the flames.

After this sad calamity, and refreshing showers, nature began to revive again. Fall flowers that had been on the point of developing, began to come out in full bloom, especially golden-rod and wild asters. And Dame Nature proved so good and kind in yielding her sweets in such fulness, that the busy bees filled their empty hives almost in less than no time, for winter stores in abundance—yea, even surplus. I do not overdraw nor misrepresent in saying that my fall crop of surplus proved equal to that of the forepart of the season. Yea, even more, over 4,000 pounds from 120 colonies proved the result of labor and toil of both bees and bee-keeper.

STEPHEN ROESE.

Maiden Rock, Wis.

Had a Very Cold Winter, Etc.

We are having (March 1) a very cold winter, with more snow than we have had in any winter for several years, but I haven't lost any colonies yet. I have 50 packed in chaff on the summer stands. I notice that they have thrown out nearly three pints of dead bees from some of the hives. Some bee-keepers have lost all.

I would like to have E. S., of Eddy, N. M., (see page 135) report through the American Bee Journal what kind of a winter they had, whether they have many sudden changes in the spring. Do they have any hot waves in summer? What is land worth near Eddy or Roswell?

Dayton, Ky. J. W. S.

Wintering Bees in the Cellar.

We have had a very severe winter in this section—two months steady cold, and quite a portion of that time severe cold, with strong, biting winds, sort of blizzard-like; plenty of snow, and drifted badly. Only one short thaw one day during the two months. Yesterday and to-day have been more comfortable. It is too early to report on bees yet, as I do not know anything about them, only my own, which I have examined to some extent in the cellar, as I winter them there, and have for several winters past with very good results. I placed in the cellar last fall 109 colonies, all in good condition. A part of them I put in Dec. 1, and the remainder Dec. 24, and just before the severe storm from the northeast here. I left them out later than usual, as I had to move them some distance, and the weather was favorable to leave them out. In fact, I prefer to leave them out as late as will answer, in order to have them use all the unsealed honey in the combs, otherwise bees will not winter well with me, in the cellar or anywhere else, and I do not see how people can winter their bees when they feed so much liquid sweet in the fall.

My cellar has been very frosty some of the time, but not cold enough to freeze anything. In fact, we have placed an oil-stove in the cellar when the coldest, which would melt the frost, but would leave it very damp, consequently my hives have become quite damp, which creates mold to some extent, and my hives are not ventilated at the top at all. I used to raise the top pieces a little all around, when the hives were placed in the cellar, but late years I do not ventilate at the top at all, and the bees came through the winter in prime condition.

I take the hives from the summer stand, place them in the cellar four hives high, therefore 100 or more hives will not need very much room. I place the bees in the cellar myself, and always do so, and prefer to for various reasons, which I may explain sometime. H. F. NEWTON.

Whitney's Crossing, N. Y., Feb. 28.

Putting Bees Out of the Cellar.

I noticed on page 179, that M. M. Baldridge, of St. Charles, Kane county, Ill., says his bees are in the cellar (Feb. 21), and he will place them on the stands the first warm spell, and let them remain on the stands. He says that is the practice of the Fox river bee-men. I am living 15 miles north of St. Charles, have 60 colonies in the cellar, and I do not intend to put them on the summer stands until April 15 or 20.

J. E. FARRELL.

Dundee, Kane Co., Ill.

Removing Propolis from the Hands.

Here is another recipe for removing propolis from the hands:

Take some soapine and a little water, rub the hands together until lather is produced, then wash the hands in water, and the propolis is removed.

You may think that soapine is rather strong, and that it may hurt the skin. No, it will not. I have often used a little soapine and water, rubbed until a white lather was formed, and then washed my face with it. Use water freely to rinse it off with, and you are all right. Try it.

Quincy, Ill. B. W. HAYCK.

The Hive He Prefers.

Having read what Dadant, Root, and others have written about the size of hives and frames, I will give my ideas on the subject. My hive is $14\frac{1}{4}$x$15\frac{1}{2}$x$10\frac{3}{8}$, inside measure. The extreme length of the top-bar is $16\frac{1}{2}$ inches. The hive is about square, counting from the inside of the end-bars, and the bees can cluster in the center at an equal distance from the ends and sides. For this country, where the honey-flow is not large, and where the blizzards are at times severe, I think it will be just the hive. I intend to use a surplus box 5x$4\frac{1}{4}$x2 inches. I have used the Langstroth frame, and for this region I think it too long, and not quite deep enough to keep stores for the bees in the center of the hive, where the winters are long. I think many colonies are lost by not being able to get to the stores in the end of the hive in very cold weather. WM. H. EAGERTY.

Cuba, Kans.

Something from an Old Bee-Man.

I have had five attacks of la grippe and lung fever the past five years, and these repeated attacks have very much lessened my vitality. I have pulled through, but they have left me very much reduced. I was not in my apiary from June 1 till Sept. 1, 1894, and I then found that the bees would have to be fed to winter. We have had three poor years for honey, but the past year was one of the few total failures in this locality.

I have taken a great deal of pleasure in working with and studying the habits of the honey-bee from boyhood. I have been working with the bees since 12 years of age, and I am now well along in my 81st year—almost, or quite, 70 years a bee-keeper. Now if there is any older bee-

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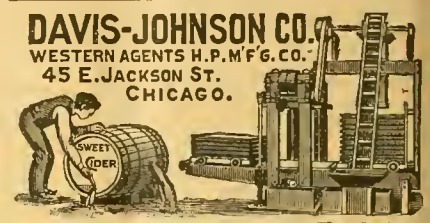

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keeper in the ranks, just trot him out, and I will with pleasnre hand over the belt.

I have past through all the changes, from the king-bee and hollow log to the present time. I have been a very successful honey-producer. I have had no other aim than the production of honey and the study of the habits of the honey-bee, in which I have taken a great deal of pleasure. I have never produced any zebra queens to sell, but I have bought a few queens to infuse new blood in my hybrids. I have never had any use for a bee-veil or any other protection, notwithstanding my bees are mostly the vicious,incorrigible hybrids; for honey-production I want no other—they are just as amiable as the Italians, that is, mine are. I fail to notice any difference. They will all sting if you invite them to. A bee can tell a coward as far as she can see him, and gets after him just to see him run.

Worthington, Ohio. A. S. GOODRICH.

Loss of Bees in Ohio.

The loss of bees throughout Ohio is great. More than half of them have disappeared.

WM. BALLANTINE.

Alta, Ohio, March 19.

Colonies Whooping Strong.

My 18 colonies of bees are all whooping strong. I never put any in-doors, but always leave them on the summer stands, and never lost a colony as yet. I make outside cases, and there they are, packed in leaves, winter and summer. I have it so that I can put supers inside, and close it over. I never keep over 18 colonies.

HENRY WHITE.

Bradgate, Iowa, March 20.

Deep Brood-Frames Again.

I have noticed that some are inclined to deep frames. My experience with hives as to size would be, 15⅛x13 and 11½ inches deep from extreme top to bottom, with a ⅜ bee-space at the bottom, and a ¼ space at the top. No more shallow frames for me. I think the standard hive is a "hobby" without a very large percentage of practical advantages.

My bees are wintered on the summer stands, and of 11 colonies I have 11 left. I never have lost a colony yet. It is on account of the preparation they receive on going into winter quarters. I always put on clover litterings off the barn floor on top of the brood-frames 4 to 6 inches deep, and all is O. K. My frames have a 12¼-inch bottom-bar, and side-bars 10⅞.

Ellis, Mich. CARSON VAN BLARICUM.

Montana Called For.

I have watched for some time for bee-notes from Montana. Who can tell us something of the soil, climate, flora, and probable success of bee-culture in the Flat Head valley? B.

A Boy's Experience with Bees.

Having read the letters of many boy bee-keepers, I thought I would try to give our bee-experience.

In 1891 I found a bee-tree from which we took a washboiler full of honey and a large swarm of bees, which was the beginning of our apiary. In 1892, papa bought two weak colonies, one of which died, and in 1893 we worked for as much increase as possible, and found another bee-tree. On about June 10, 1893, the colony which I had found first swarmed, but as soon as the swarm left the hive, it began raining, and before we could get them under shelter, they were as wet as drowned rats; but papa swept them into a pan and took them upstairs, where he put them on a cloth near the entrance of a hive, which had a comb of young brood and honey in it. The bees soon got warm and dry, for they were near the stovepipe, and began going into the hive. They were soon all in, and now it is a strong colony, which belongs to me.

In the spring of 1894 we had 10 colonies, and increased to 16, and got about 250 pounds of clear white honey. We found three more swarms, two of which we put together, and gave the other away. From the last bee-tree we cut we took six water pails jam-full of honey.

We leave our bees on the summer stands. I will try to do my best with my colony, and report again if this is not dumped into that "big basket."

THEODORE K. SATTLER.

Glenwood, Oreg., March 17.

Section Covers—Bee-Brushes.

We use the common oilcloth for our section covers, and we find it the best cover we have tried. Our bees are blacks and Italians. We like the Italians very much, but we cannot tell which gathers the most honey, because they are mixed. I think we have as many Italians as blacks.

For a home-made bee-brush, I think a few small branches from a Russian pine-tree would be sufficient for brushing off bees when they settle on a stump or body of a tree. Of course, these brushes would not do for brushing off the bees from the frames. We do not have much to do with extracted honey—we only deal with comb honey. I do not think a brush made from animals' hair, or even a feather from a fowl, would be a good one. It will work all right, but I think it makes a bee cross to be brushed with a feather. Take a bee when she is in good humor, and brush her with a hair a few times—it will not take her long to "change her tune."

Savanna, Ills. CHAS. D. HANDEL.

Adulteration—Basswood in the South.

Permit me to say amen to the recommendation headed, "Properly label the adulteration," page 179. "Them's my sentiments" exactly, Mr. Jenkins. Why should vendors of adulterated honey not be restricted by law the same as those of "oleo" and other spurious wares? Is there any justice in permitting this base imposition upon an unsuspecting public, to the disgust of the deceived purchaser, and the detriment,and ultimate death of, honest production?

As none of the many who are better qualified by reason of their long residence in this State, have noticed the question as to how far south basswood would grow, I would say that I have seen quite a number of large, thrifty basswood trees growing in the hammocks of this (Volusia) county. It is said to yield honey, though my informant could not give the exact season of bloom. H. E. HILL.

New Smyrna, Fla., March 20.

Convention Notices.

MINNESOTA.—The regular semi-annual meeting of the Southern Minnesota Bee-Keepers' Association will be held on the first Monday in May, 1895, at LaCrescent, Minn. All bee-keepers invited. E. C. CORNWELL, Sec.

Winona, Minn.

ILLINOIS.—The spring meeting of the Northern Illinois Bee-Keepers' Association will be held at the residence of H. W. Lee, in Pecatonica, May 21, 1895. It will be held one week later if it is a stormy day.

New Milford, Ill. B. KENNEDY, Sec.

RUDY'S PILE SUPPOSITORY

Is guaranteed to cure Piles and Constipation, or money refunded. 50 cents per box. Send two stamps for circular and free Sample to MARTIN RUDY, Registered Pharmacist, Lancaster, Pa. NO POSTALS ANSWERED. For sale by all first-class druggists everywhere. Peter Van Schaack & Sons. Robt. Stevenson & Co., Morrison, Plummer & Co., and Lord, Owen & Co.. Wholesale Agents, Chicago, Ills.

Please mention the Bee Journal. Nov15

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Mar. 18.—Demand is good for all grades of honey excepting dark comb. We quote: Fancy comb, 15c.; No. 1, 14c. Extracted, 5@6½c. J. A. L.

CHICAGO, ILL., Mar. 7.—During the past two weeks a good movement has been felt in the market. Sales have been in small lots, but quite frequent. We quote: White comb of the highest grade, 14c.; off in color, 13@13½c.; yellow, 10@11c; dark, 7@9c. Extracted, 5½@ 7c.—the higher price for white in 60-lb. cans.

Beeswax, 28@30c. R. A. B. & Co.

KANSAS CITY, Mo., Mar. 14.—Demand is fair for comb and extracted. We quote: No. 1 white, 1-lbs., 14@15c.; No. 2 white,12@13c.; No. 1 amber, 11@12c.; No. 2 amber, 10@11c. Extracted, 4½@6½c. Beeswax, 22@25c.

C. C. C. & Co.

CINCINNATI, O., Mar. 19.—Demand is slow for extracted and comb honey, with a fair supply. We quote: Comb honey, 13@16c. for best white. Extracted, 4@7c.

Beeswax is in good demand at 25@28c. for good to choice yellow. C. F. M. & S.

PHILADELPHIA, PA., Apr. 1. — Choice white clover honey is getting very scarce at 14c. Dark and poorly filled sections, 8@10c. Demand is falling off on extracted, prices ranging from 4½@7c. Strictly pure white clover very scarce at 10c. Beeswax arriving more freely and selling at 30@31c. W. A. S.

NEW YORK, N. Y., Feb. 20.—We are gradually working down our stock of comb honey, and the indications are that we will succeed in disposing of all of the white honey and possibly all of the dark during the spring, at following quotations: Fancy white, 1-lbs., 12c.; fair, 10c.; buckwheat, 8@9c. The market is well supplied with extracted honey. Demand is fair for choice grades, while common stock is neglected. We quote: White clover and basswood, 5½@6c.; buckwheat, 5@5½c; Southern, 45@55c. per gallon, according to quality. Beeswax firm and in good demand at 30@31c. H. B. & S.

BUFFALO, N. Y., Mar. 16.—The honey market is getting quite well cleaned up here. We quote: Fancy, 13@14c.; choice, 11@12c.; buckwheat and commoner grades, 7@8c. Extracted is in very light demand here, and we would not advise shipments. B. & Co.

SHIP Your Butter, Eggs, Poultry, Veal, Beans, Potatoes, Hides, Pelts, Wool, Hay, Grain, Green and Dried Fruits, or ANYTHING YOU MAY HAVE to us. Quick sales at the highest market price and prompt returns made. Write for prices or any information you may want.

SUMMERS, MORRISON & CO., Commission Merchants, 174 South Water St., Chicago, Ill.

REFERENCE—Metropolitan National Bank, Chicago.

6A13t Please mention the Bee Journal.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

J. A. LAMON, 43 South Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 28 & 30 West Broadway.
CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.

Kansas City, Mo.

C. C. CLEMOMS & Co., 423 Walnut St.

Buffalo, N. Y.

BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

Philadelphia, Pa.

WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 p.; illustrated. 25c.

Doctor's Hints

By DR. PEIRO, Chicago, Ill.
100 State Street.

Honey or Butter—Which?

So much is being written in farming and dairy journals in regard to tuberculosis (consumption) of cows, and questioning the value—rather the danger—of butter as a food from these diseased sources, that one is naturally led to consider a safer, cheaper and healthier substitute. And where shall we find it except in good, pure honey? In this substance we may feel perfectly secure from any and all diseases. Its nourishing properties are certainly equal, and for many, greater than that of the best butter. Honey, used in moderation, would prove as palatable, and its possession as practical, and at no greater cost, if not cheaper, than butter. If the price of the cow, feed required, attention needed, and consequent labor in obtaining butter is contrasted with an equal outlay in space and expense for bees, I believe it will be found that the total in expenditure and income will vary but little, and that in favor of the little workers. Let some brother who has gone to school since I have, figure out the problem, and give us the benefit of his deductions.

Of one fact I feel possessed of—that if this question is presented to the unintimidated vote of our children, "honey" will get the grandest nomination and enthusiastic election ever vouchsafed a candidate for public favor!

BEESWAX.

We will guarantee to get **28 cts.** for all the Beeswax of light color or yellow, shipped to us for sale during the month of April, 1895.

J. A. LAMON, 43 S. Water St., CHICAGO, ILL.
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THE A. I. ROOT CO'S GOODS IN MISSOURI
32-page Catalogue Free.
4Atf **John Nebel & Son, High Hill, Mo.**
WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

500 Bbls. Sweet Potato —SEED—

Yellow Jersey Best Variety, $3.00 per bbl. Second Size—$2.50 per bbl. Red Bermuda, Red Spanish, Southern Queen—$4.00 per bbl. 5 % Discount on 5-bbl. lots. **Our Stock is Fine.** Order now and secure a supply at reasonable prices.

L. H. Mahan, Box 143, Terre Haute, Ind.
13A3 *Mention the American Bee Journal.*

Italian BEES & QUEENS

Ready in May. Queens, $1.00. Bees by the Pound, $1.00. Two-frame Nuclei, with Queen $2 50. One-frame, $2.00. Also, **Barred P. R. Eggs,** for setting, $1.00 per 15.

Mrs. A. A. SIMPSON, Box 48, Swarts, Pa.
15A13t Please mention the Bee Journal.

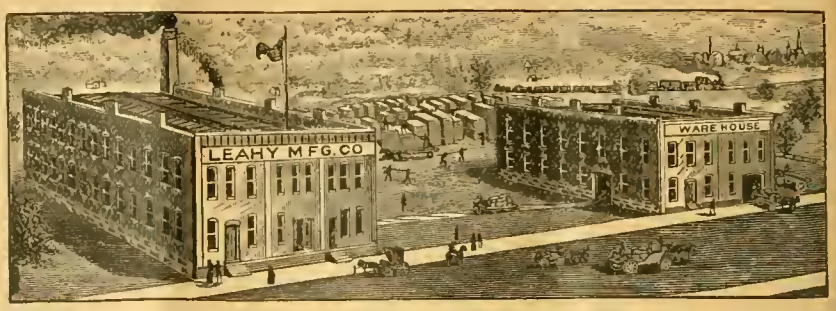
—SECTIONS—

Having a large stock of 7-to-foot and 1 15-16 inch Sections, will sell them—

No. 1 White $1.75 M ; Cream $1.25 M

Discount on Quantity. These are **perfect** Sections. Catalogue of **Supplies and Bees** FREE.

I. J. STRINGHAM,
105 Park Place. NEW YORK, N. Y.



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I will pay the Freight on Cash Orders of $20 or over at Catalogue rates, if within 300 miles of Chicago.

—My Illustrated Catalogue—

of **Bee-Keepers' Supplies FREE.**

Thos. G. Newman, 147 South Western Ave. CHICAGO, ILL.

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If you care to know of its Fruits, Flowers, Climate or Resources, send for a Sample Copy of California's Favorite Paper—

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The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.40 per annum. Sample Copy Free.

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FOUNDATION

Is way up, and it will pay you to look around. **Working Wax into Foundation** by the lb. **a Specialty.**

Beeswax wanted at all times. I pay the highest price, and sell Foundation at a low margin. Send for Samples and Prices, to—

GUS DITTMER, AUGUSTA, WIS.
Reference—Augusta Bank. 16Atf

APIARIAN SUPPLIES VERY CHEAP —"Amateur Bee-Keeper"—how to manage bees, etc.—25 cts. The "Model Coop." for hen and her brood Wyandotte, Langshan and Leghorn Eggs for hatching. Cat. free, but state what you want
J. W. ROUSE & CO., Mexico, Mo.

GOOD GOODS are always in demand.
LOW PRICES are appreciated in these times.
PROMPT SERVICE is a necessity to business.
We Combine All Three.

Write for free Catalogue and Price-List.

G. B. LEWIS CO., Watertown, Wis.

Be sure to mention the American Bee Journal when you write.

PATENT WIRED COMB FOUNDATION
Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation
Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook Montgomery Co., N. Y.

BEGINNERS.

Beginners should have a copy of the Amateur Bee-Keeper, a 70-page book by Prof. J. W. Rouse. Price 25 cents; if sent by mail, 28c. The little book and the Progressive Bee-Keeper (a live, progressive 28-page monthly journal) one year, 65c. Address any first-class dealer, or
LEAHY MFG. CO., Higginsville, Mo.

The World's Best
BEE-SMOKER.

3-inch Fire-Barrel. Burns all kinds of fuel. It is **Simple, Efficient and Durable.**

Price reduced to $1.00, postpaid, for the next 60 days. **Order at once.**

W. C. R. KEMP, Orleans, Ind.
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1895 SAVE MONEY 1895

If you want first-class **ITALIAN QUEENS** *FOR BUSINESS,* **Foundation** at Wholesale Prices, **Hives,** suited for the South, or **SUPPLIES,** send for Price-List—to

J. P. H. BROWN, AUGUSTA, —GA.—
10A13t *Mention the American Bee Journal.*

EVERGREENS

that live and grow is what you want. I sell them. Nursery grown trees, 365, 8 varieties, transplanted evergreens one foot and up, packed and on cars for $30.00. Greatest bargain ever offered. Smaller lots cheap. Windbreak trees a specialty. Illustrated catalogue free. Local Agents wanted. Mention paper. D. HILL, Evergreen Specialist, Dundee, Ill.

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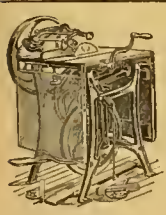
E.L.Kincaid's Ad

Notice to Bee-Keepers & Dealers.

I have one of the Largest and Best Equipped Factories in the West devoted entirely to the manufacture of **Bee-Keepers' Supplies.** Having secured the right to manufacture the **Improved Higginsville Hive Cover,** I will place it on all Hives sent out this year, unless otherwise ordered. Send your name on a postal card at once, for Large Illustrated Catalogue and Price-List **free,** giving prices and full description of the Improved Hive Cover, D. T. Hives, Sections, Frames, Supers, Crates, Boxes, Extractors, Foundation, Smokers, Veils, Queen-Cages, Etc. **E. L. KINCAID, WALKER, MO.**

7D8t *Mention the American Bee Journal.*



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Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing, Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery. Sold on Trial. Catalogue Free.

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1 Colony Italian Bees in 10-frame Langstroth hive, $5.00; 2 or more, $4.00 each. Tested Italian Queen $1.00. Address.

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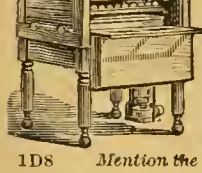

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Bee-Escapes—Stampeders. Cheap but good. 8 cts. each; 12—75c., postpaid.

Queen - Catcher—Little Giants. Try 1; try more. 25 cents each; 12, $2.50, postpaid. Instructions with each. M. O. Office, Los Angeles.

15Dtf **C. W. Dayton, Florence, Calif.**

NEW 68 PAGE CATALOGUE AND GUIDE to Poultry Raisers for 1895. Contains over 130 fine illustrations showing a photo of the largest hennery in the west. Gives best plans for poultry houses, sure remedies and recipes for all diseases, also valuable information on the kitchen and flower garden sent for only 10 cents. John Bauscher, Jr., P. O. Box 5 Freeport, Ill.

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Best **New** and **Old** varieties. **Best grown Plants.** Catalogue **Free.** With instructions for their culture. Send for it **Now.** Mention this paper. Address, **E. J. SCOFIELD,**
3A13t P. O. Box 113, HANOVER, WIS.

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

How Much Convention Time Should be Given to Essays?

Query 966.—What proportion of the time of a convention is it best to have occupied with essays?—Missouri.

C. H. Dibbern—None at all.

G. M. Doolittle—About one-tenth.

H. D. Cutting—It depends upon how long and dry they are.

Mrs. L. Harrison—One for each session, and plenty of recesses.

W. G. Larrabee—Just enough to provoke enlightening discussions.

Jas. A. Stone—Essays, if not exceedingly good, had better be "few and far between."

B. Taylor—I do not know. I only know that general talk and discussion pleases me best.

Jennie Atchley—I believe a convention ought to be for bee-keepers to talk, and send essays to the bee-papers.

Chas. Dadant & Son—One-fourth, or even less. Let them have very short essays, just to introduce the subjects.

Dr. J. P. H. Brown—That depends upon the merits of the essays, and the length of time the convention is to be in session.

P. H. Elwood—All of the time, unless the discussions can be well managed, and the time occupied by persons who are careful what they say.

R. L. Taylor—Only just sufficient so that the rest of the time may be occupied by intelligent discussion. About one-tenth of the time is usually sufficient.

Mrs. J. N. Heater—All depends upon the nature and quality of the essays. A few, short, well written ones, on practicable subjects, are just the thing to open discussions.

Eugene Secor—That's forbidden territory. The fellows that run conventions must be allowed to judge. But I think it depends upon many things which I have no room here to discuss.

Dr. C. C. Miller—If the right men are there, it's better to have no essays. If no one present knows anything about bees, the time might all be taken up with essays written by some others that do know.

Rev. M. Mahin—That depends upon so many things that no rule can be given. Much would depend upon the character of the essays, and much upon what the convention could do if there were no essays.

E. France—Short essays to bring out discussion are all right. The essay is the thought of one man, the discussions are the thoughts of many. Short essays, or perhaps questions, would be better than long, flowery essays.

Jas. A. Green—As a rule, only enough to keep things moving. Often, any essays at all will be only a waste of time, comparatively speaking. With a good man in the chair, and an inclination on the part of members to talk freely on practical subjects, and keep to the point, essays had better be omitted altogether.

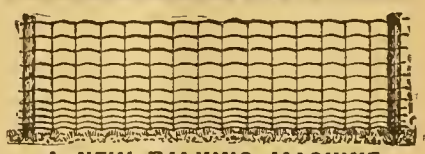
Prof. A. J. Cook—I would have each subject opened with a short, terse, carefully-prepared essay—say 10 to 15 minutes long, and discussed for 40 to 45 minutes. That is the way we run our farmers' institutes, and they are rousers.

Wm. M. Barnum—None. Let them appear in the bee-papers. Let the "question-box," discussion of practical topics, confined to short, off-hand "talks," and social "friend making" be the objects and work of the conventions.

Rev. Emerson T. Abbott—That depends upon the essays. Generally speaking, I should say about as much as the people who make up the convention want. Some want more, some want less, and some do not want any. Let them have what they want.

J. E. Pond—This is purely a matter of opinion. For myself, I should like three or four only, on really practical points, as texts for discussion and criticism. The whole aim and object of a convention is to get together socially, and "swap talk on bees."

G. W. Demaree—I don't know that it matters much. Our bee-conventions are more social "reunions" than anything else, and any course that will entertain best, I should judge to be the best. I never go to a convention to learn anything—I go to meet old friends, and make new ones.



A NEW TALKING MACHINE

is the latest invention, and it differs from the phonograph in this; instead of merely repeating what is said to it, this machine takes both sides of the fence question. It gives straight wire a fair show against **coiled springs,** convinces the most skeptical that expansion and contraction **must** be provided for, and nothing but abundant **elasticity** will do it. Send for particulars.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

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For Sale or Exchange!

Lot of Miscellaneous Supplies, some new and some second-hand. **Must be disposed of on account of removal.** Write for what you want or for list of Goods. Will exchange for team, harness, buggy, or platform wagon, or offers. **F. H. RICHARDSON,**
15A8t LACLEDE, Linn Co., MO.

Promptness Is What Counts!

Honey - Jars, Shipping - Cases, and everything that bee-keepers use. **Root's Goods at Root's Prices,** and the best shipping point in the country.

Dealer in Honey and Beeswax. Catalogue Free.

Walter S. Pouder
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AND 3-BANDED ITALIAN—ALSO SILVER-GRAY CARNIOLAN QUEENS

Reared in separate yards. Italians warranted purely mated, all at same price. Untested, $1.00 each; 5 or over, 10 per cent. off. Tested Italian, $1.50. Write for Catalog of **Bee-Keepers' Supplies.**

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THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.

☞ **W. M. Gerrish**, of **East Nottingham, N. H.**, is our Eastern agent. New England customers may save freight by purchasing of him.

Golden Queens

From Texas. My Bees are bred **For Business,** as well as for **Beauty** and **Gentleness.**

☞ Safe arrival and reasonable satisfaction guaranteed. Write for Price-List.

Untested, $1.00—Tested, $1.50.

J. D. GIVENS, LISBON, Box 3 TEX.

10A26 *Mention the American Bee Journal.*

I ARISE

TO SAY to the readers of the BEE JOURNAL that

DOOLITTLE

has concluded to sell —BEES and QUEENS— in their season, during 1895, at the following prices:

One Colony of Italians on 9 Gallup frames, in light shipping-box	$7 00
Five Colonies.....	30 00
Ten Colonies.....	50 00
1 untested queen.	1 00
6 " queens	5 50
12 " "	10 00
1 tested Queen...	$1 50
3 " Queens.	4 00
1 select tested queen	2 00
3 " " Queens	5 00

Select tested queen, previous season's rearing.. 4 00
Extra Selected for breeding, THE VERY BEST.. 6 00
About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.

—o—

☞ Circular free, giving full particulars regarding the Bees and each class of Queens.

Address

G. M. DOOLITTLE,

12A25t BORODINO, Onon. Co., N. Y.

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MUTH'S HONEY EXTRACTOR

PERFECTION **Cold-Blast Smokers,**

Square Glass Honey Jars, Etc.

For Circulars, apply to CHAS. F. MUTH & SON, Cor. Freeman & Central Aves., Cincinnati, O. Send 10c for Practical Hints to Bee-Keepers.

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Patents Pending On NEW PROCESS— NEW MACHINERY NEW PRODUCT—

in the manufacture of

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Result—Lowest Prices and Best Work. Wax Wanted.

Price-List and Samples Free.

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Abbott's Space.

☞ The "St. Joe" can hold its own with any of them. Every one who examines it admires it, especially for its cheapness. —BARNARD, Mo.

That "St. Joe" Hive!

Write for a Circular and Say How Many Hives You Will Need.

Address,

Emerson T. Abbott,

ST. JOSEPH, MO.

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Seventeen Years Ago ✻✻✻✻✻✻ ✻✻✻✻✻✻ Dadant's Foundation

Was first offered for sale. The following parties keep it in stock and have kept it for years for sale. Why? Because they want to handle only the best goods, and they say they get the best goods when they buy Dadant's Foundation.

Thomas G. Newman, Chicago, Ills.
C. F. Muth & Son, Cincinnati, Ohio
Chas. H. Green, Waukesha, Wis.
Chas. Hertel, Freeburg, Ills.
E. Kretchmer, Red Oak, Iowa.
Jos. Nysewander, Des Moines, Iowa.
G. B. Lewis Co., Watertown, Wis.
James Reynolds Elevator Co., Ponghkeepsie, N Y.
Page & Lyon, New London, Wis.
La. Bee-Keepers' Supply Co., Donaldsonville, La.
E. F. Quigley, Unionville, Mo.
G. K. Hubbard, Fort Wayne, Ind.
L. Hanssen, Davenport, Iowa.
C. Theilmann, Theilmanton, Minn.
E. C. Eaglesfield, Berlin, Wis.
Walter S. Pouder, Indianapolis, Ind
E. T. Abbott, St. Joseph, Mo.
J. M. Jenkins, Wetumpka, Alabama
John Rey, East Saginaw, Mich.
J. W. Bittenbender, Knoxville, Iowa.
Vickery Bros., Evansville, Ind.
Mrs. Jennie Atchley, Beeville, Texas.

Is not such a steady trade a proof of real merit in the goods we sell? We also make a specialty of **Veils and Veil Stuffs** of best quality.

Beeswax Wanted at All Times.

Bee-keepers' Supplies, Smokers, Sections, Tin Pails, etc. **Samples of Foundation and Tulle FREE** with circular. Instructions to beginners with circular. Send us your address.

CHAS. DADANT & SON,

Mention the American Bee Journal. **HAMILTON, Hancock Co., ILL.**

—SOUTHERN—

Home of the Honey-Bee

Where you can buy **Queens,** as good as the best—Warranted Purely Mated, and guaranteed free from Paralysis. From either an Imported or a Straght 5-B. or Golden Mother—75 cents each; 12 for $7.50. Tested, $1.00 each; 12 for $9.00. After June 1st, 50 cents each; 12 for $4.00; Tested, 75 cents each, 12, $7.50. Good Breeders, $2.00 each; Straight 5-B. or "Faultless" Queens, $2.50 each. **Bees,** 75c. per lb. Circular Free. Address,

HUFSTEDLER BROS.

10A26 CLARKSVILLE, TEX.

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ORDER SPRING QUEENS.

I will send a Guaranteed 5-Banded Yellow Queen, bred from a Breeder selected from 1000 Queens (some producing over 400 lbs. of honey to the colony); or a 3-Banded Italian Leather-Colored Queen direct from a Breeder imported from Italy. Oct. '94—**at 75c.,** and a special low price for a quantity.

My secret is to sell an extra-large amount, which enables me to sell at low prices. Will run this spring 350 Nuclei—have 1 home and 4 out apiaries. **Booking Orders Now**—will begin shipping March 1st. No Queens superior to my Strain.

☞ Send for Descriptive Catalogue and Testimonials. to

WM. A. SELSER, WYNCOTE, PA.

OUR PRICES

May appear to be higher than some manufacturers'; but when you consider **Quantity and Quality,** they are low. You may be able to buy

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Dot's a Pee in Your Ponnet.

BY MRS. E. R. B.

I goes me out unto my little hive
  Shust as prave as a corporal's guard,
With a shmile on my face I save for mine wife
  Vhen I try not to look very schkared.
What you tink? Dot bees meet me at the door—
  Thousan' hiss, thousan' pinch, thousan' sass,
Und de more I shump and de more I roar
  Und de more I roll me on the grass—

Ho, dot's a pee in your ponnet!
  Ho, dot's one on your sight!
One pee, mine friend? *Dare's fifty a minute!*
  Dare's swarms! and dey means to unite!

Vell, it kool down shome, and she laugh, mine vife,
  Und she say, when dey shwell me all over—
"It's shust pecause when you go to dot hive,
  You *forgots* to take along de paper—
De pig leetle book dot the honey-man sells,
  Mit those hive dis side of his fence—
Und dill you do, den you shump and yell
  Dill you don't know where to commence."

Ho, dot's a pee in your ponnet!
  Ho, dot's one on your sight!
One pee, mine friend? *Dare's fifty a minute!*
  Dare's swarms! and dey means to unite!

Who is tends dose pees? Mine vife, mine friend—
  Mine vife and mine vife's *dear* mother.
What you tink by de looks doze pees pretend
  Doze wimmins vas as swheet as der clover.
But dough *I* paid for dot out-west pook,
  It's shust de shame way mit de pees,
Und I climb de fence mit a shide-long look,
  Vhile dey sof'ly laugh and call doze *geeze*—

Ho, dot's a pee in your ponnet, etc.

What Shall We Do for the Future?

BY ED JOLLEY.

What will the bee-keepers do
  In twenty or thirty years hence,
With the slaughter of forests and forage—
  The nectar supply will come whence?
Our basswood is fast disappearing,
  The clover gives way to the grain,
The woodman spares not in his havoc—
  Soon little that yields will remain.

The sources of yore are thinned down,
  Soon little or naught will be left,
Unless we wake up to our duty
  Of honey we'll surely be bereft.
Then Duty is calling us, friends,
  'Tis pointing the way out ahead;
We must fill up the gaps that are growing,
  Before what we have are all dead.

Bees Working on the Willow Bloom.

Take slips of the basswood and plant them
  Along on the hillside and dell,
In fence-rows, corners and places
  Wherever you think they'll do well.
Sow catnip around on the rough lands,
  In the crags of the rocks on the hill,
By roadside, and brooks in the meadows,
  And places too rough for to till.

Plant asters about in the marshes,
  Sow Alsike abroad in your fields—
It will pay you well for its fodder,
  Besides the fine honey it yields.
Sweet clover put out in the pasture,
  And along by the wayside and stream;
And the ills that now threaten our future
  Will pass away much like a dream.

Contributed Articles.

On Important Apiarian Subjects.

Best Size of Frames for Extracted Honey.

BY CHAS. DADANT.

Since the publication of my article on the size of bee-hives (page 166), I have received several letters of enquiry asking my opinion of the best size of frames for producing extracted honey, and whether I consider the 12-frame Langstroth hive as good as the 10-frame Quinby.

For a number of years I made experiments on the size of hives, and for the past 28 years I have been publishing my views, mainly in bee-journals published in the French language, and I feel not a little pride in saying that my arguments, in favor of the large frames and large hives, seem to prevail in Europe; for the large Quinby hive is now very largely used in France, Switzerland, and the French-speaking countries, under the name of Dadant, Dadant-Blatt, and Improved-Dadant hive. Yet, this hive is nothing but a very plain movable-frame hive, the invention of Mr. Langstroth, who was the first man to make a practicable hanging-frame hive, with movable ceiling. Quinby only changed the size of the frame, retaining the main features of the Langstroth hive. To this I added but a few minor improvements, and increased the number of the frames, making a slightly larger hive than either Langstroth or Quinby recommended. The European bee-keepers have set aside the names of the two original and main inventors, to call the hive the Dadant.

Now another bee-keeper, Mr. Blatt, acted probably upon a hint that I gave in "Langstroth Revised," and which read as follows: "The Langstroth-Simplicity frame is long enough, but hardly deep enough. The Quinby frame is deep enough, but would be better if a little shorter." Mr. Blatt reduced the length of the frames of the Dadant to the exact length of the Langstroth frames, preserving its height. This hive, which agrees exactly with the criticism above-mentioned, is now called the Dadant-Blatt, and I will say that if we had not so many hives of the former style, I would be in favor of adopting it without hesitating. Still, I would decrease the height of the hive so as to be able to make the body out of 12-inch lumber, as it is usually difficult, in this country, to procure lumber more than 12 inches wide in any quantity. Then the Langstroth frame would be enlarged 1¾ inches in depth. This increase would give 16,360 cells more in a 10-frame hive, allowing the queen a sufficient space to lay about 3,600 eggs per day.

In the editorial on page 172, our friend Ernest Root is quoted, who complains of the nuisance to the manufacturer of being compelled to make special covers, supers and bottom-boards, for so many different hives, and of all the nuisances that would be avoided if we all used the same size hives. Those who wish to try this Blatt hive with their 10-frame Langstroth, need change neither cover, supers, nor bottom-boards. They need only deepen the hive by adding a cleat 1½ inches wide, and changing the depth of the frames. But such an experiment to be conclusive, should be made on more than one or two hives.

Hamilton, Ill.

[Mr. Dadant will soon continue his series of interesting articles on the production of extracted honey, in these columns. He will next describe the methods as practiced in the Dadant apiaries.—THE EDITOR.]

Spreading Brood—When and How to Do It.

BY G. M. DOOLITTLE.

As the time of the year is upon us when active work must commence in the apiary, I thought that a few words on spreading brood would not be amiss, especially as some seem prone to think that Doolittle recommends an indiscriminate practice in this matter. If in any article that I have ever written I have conveyed the impression that an indiscriminate spreading of the brood would be of value, either to the novice or the expert, I wish to take it all back, for I never wished to convey any such idea.

In some of my articles I have placed the time of commencing to spread the brood about May first. This was done with the expectation that each one would use judgment, that judgment to be based upon their locality, the condition of the bees and the advancement of the season. For instance: One season, when the first of May arrived, there was not a particle of brood in any of my hives to spread. For me to have tried to spread the brood at that time would have shown that I was devoid of common-sense. Again, in 1878, when the first day of May arrived, all of my hives were filled with brood and bees, some colonies having eggs and larvæ in the queen-cells preparatory to swarming. To have waited till the first of May before touching the bees, in such an early season as was that of 1878, would have shown that I was not up with the times as I should have been.

Once more: All colonies in any apiary cannot be treated alike. Take an ordinary year in this locality, the date being May 1st. In the first hive we open we find a goodly number of bees, say enough to cover seven combs on a frosty morning. We open the hive and find brood in only five combs. The center comb of the five has brood in it nearly to the bottom and side-bars, as well as at the top. The two on either side of it are two-thirds filled, while the two outer frames have brood in each, to the amount of one-third of a frame full. Now, practical experience covering a period of more than 20 years, has proven to me that a gain of two days in bees can be secured by reversing those combs of brood, or, in other words, placing the middle combs, or those fullest of brood, on the outside, and those from the outside having the least brood in them, in the center. By this plan we have not really spread the brood, but we have placed it in such shape that we have made an *ample* number of bees desire all the brood which they could care for, and the result is, that in about a week, or the next time we open that hive, we find those five frames all solid with brood—a state of things which always delights any bee-keeper.

We now put a comb of honey, having its sealing broken, in the center of these five filled combs of brood, which so stimulates the bees, by its removal, that, should a cold night now occur, the bees will be so active that the required temperature is kept right up, and a gain of two or three days more is made. So we keep on with this colony till the hive is filled with bees and brood, and that at the right time to take advantage of the honey harvest when it arrives. Having the bees thus, they will make all the difference between a full crop of honey and half a crop, or in extreme cases or short seasons, no crop at all. Will not this then pay for the fun we have had in thus building up that colony of bees?

The next hive I come to gives off a light buzzing sound, scattered down between two or three spaces between the combs, thus showing that there are but few bees in the hive, for I do not know that I ever opened a very weak colony without hearing this sound. I know that it is weak in bees from this, but am surprised to find that they have brood in three combs, and the wonder is that the bees have held that brood as well as they have. Now should I treat this colony as I did the first, any one would say I was a fool. This colony has all of the brood crowded together, so there is only just space enough between the combs for a single tier of bees to stand, or what is known as "the contractiou plan" is used, and the bees are shut on these combs of brood and tucked up as warm as possible, so that they can hold this brood till it matures. Here they are kept till they have these frames filled with brood, clear down to the bottom corners, and till the bees begin to crowd out beyond the division-board, when it is time to treat this colony the same as we did the first, and they should not be so treated any earlier.

Away back, years ago, after a hard winter, my bees came out very weak in the spring, I having only 46 remnants of colonies left. About May 1st, I went to visit a bee-keeper living in a warm, sunny nook, and found him spreading brood, with his colonies all in a prosperous condition. I came home to my own poor apiary, situated in its bleak location, and when I really saw how poor it was I came nearly being discouraged. I sat down and meditated about buying bees, but to do so at that time meant running in debt. I finally decided no, and went to work with a will to do the best I could with those I had, on the plan above given. I gave the bees attention just when it was needed, according to my best judgment, leaving no stone unturned which I thought would add a farthing to the success I was striving for, and in the fall I had almost $1,600 as my pay, the 46 colonies producing an average of a little over 106 pounds of comb honey per colony, spring count. This put an ambition into my life never before enjoyed, and which has had much to do with my love for the work in the apiary that has followed me ever since.

After 26 years of work in the apiary, I can truly say that there is no pleasure in apicultural life greater than that which comes in making colonies build up in time for the honey harvest, so as to work to the best advantage in it.

Borodino, N. Y.

"Uniting Colonies of Bees."

BY CHAS. F. MUTH.

When I read the above caption on page 71 of the "Old Reliable," I was struck again by the idea, as has been the case many times, that the least of our bee-keeping friends, and I include our "posted" friends, have a good understanding of "uniting."

It should be understood that any colony in normal condition, *i. e.*, having a laying queen, will accept, without any trouble, any colony which has been queenless for at least 24 hours. Consequently, if you want to unite two colonies standing side by side, deprive one of its queen, and the next day, or the day following, hang the combs with adhering bees of the one colony in the second story of the other colony, immediately above the bees below, and remove the empty stand. The united colonies will use the same entrance, and no fighting will be done. If you are preparing your bees for winter, and want to confine all to the brood-chamber, brush them down the next day, or any day thereafter. No harm will be done.

It should also be understood that you can never unite a colony having a virgin queen with a colony in normal condition. If you do it anyhow, and no matter what precautions you may take, the last bee of the one party will be killed before the fight ends. There are no infallible rules laid down by the bees, nor the bee-keeping fraternity, but the above rules hold good in nine cases out of ten. Convince yourselves.

Cincinnati, Ohio.

Bee-Keeping in California.

BY DR. E. GALLUP.

I do not know when I enjoyed myself any better than I did at the California State bee-convention, Feb. 5, 1895. It seemed so much like old times.

I see they were crying cold weather away down South the first of March. Well, we have had a splendid winter here in California. C. W. Dayton, at Florence, Calif., says bees were gathering pollen and honey rapidly on Jan. 13. They were no doubt gathering from the eucalyptus, as there are many groves in and around Florence. The fragrance from eucalyptus honey is remarkable. I have often wondered why California bee-keepers did not set out the trees around or near their apiaries. They are a remarkably fast-growing tree, and can be had of any nursery-man at one dollar per hundred. After the first year they need but very little water.

I am asked by many Eastern correspondents, why bees cannot be kept in the valleys as well as in the mountains. They are kept in many localities in the valleys, and in other localities the inhabitants proclaim them a nuisance. Then the honey is not, as a general rule, of a good quality. In many cases, I think they are like the old lady who lived near me in Wisconsin. The first season that I kept bees there she complained bitterly that my bees were carrying all of her currant blossoms away, and she should not raise a single currant, etc.! Another thing, she was afraid for her life every time she went out-doors, for the pesky things she knew would sting her to death some day!

Bees do remarkably well in the valleys, so far as increase, storing honey, making wax, etc., is concerned, and at certain seasons they store a first-rate article of honey. A Mr. Konkle, three miles west of Santa Ana, rears lots of them for sale, and for their wax. He increased from 15 (and the most of them only nuclei) to 130 colonies last season, and in a dry year when bees in the mountains were starving to death. All are in splendid condition, and the most of them in two-story hives, and extra heavy with honey. He is selling them to good advantage this season to mountain bee-keepers to restock their apiaries.

Mr. J. Fox has a mountain apiary and a valley ranch, three miles south of Santa Ana. He always keeps some bees on his valley ranch. He moved a part of his mountain bees down to the valley last season. He lost about one-half of those left in the mountains, and now he is moving bees up from the valley to restock his mountain apiary. You must know that nuclei of two and three combs will winter here just as well as a full colony. I have said, and still believe, that bees are self-sustaining in all seasons, if properly managed. Mr. McIntyre, at the convention in Los Angeles, if I mistake not, made the statement that he fed but very little the past season, and considered his bees in very good condition. His plan is my plan, or my plan is his plan, I care not which way you take it. That is, never to extract after the bees show a disposition to rob. Let them fill up the supers, and let it remain on the hive until the next season. It is not lost, for if the season proves to be a good one, you can extract just before the flow commences. If a poor one, leave it there, and let the bees draw on their surplus as they require. The season can almost invariably be foretold by the amount of rain during the winter. That is, if we have a sufficient amount of rain, we can with a certainty expect the bees to store some surplus. We cannot always predict the amount, for that depends a great sight upon the weather, the same as it does in the East or South.

On the above plan, the bees cost nothing in a poor season, and in a good season they are almost sure to give us the sweets. Quite a proportion of bee-keepers here extract all they can possibly get, which leaves the bees in bad condition for a dry season.

Santa Ana, Calif.

The Will of the Queen.

BY GEO. BISCHOFF.

Can a queen lay eggs at will, some for worker-bees, and some for drones? I say yes. In the first place we must know a bee is an insect, although I noticed in the American Bee Journal of last year, that some big bee-man in Iowa has discovered that the bee in an animal—which is right. So do men belong to the animal class, but it is not necessary that a man must be a mule.

The life of the insect is different from any other animal. Take the hen—she will lay eggs without a rooster, but they will not hatch. But take a laying worker-bee—she will lay the cells full of eggs, and they all hatch, but nothing but drones—and they are no good. Now take a queen that had no chance to meet a drone—she will lay eggs in time, and they hatch, but all drones, and they are as good as any.

Here is another thing: We all know if we have a pure Italian queen, and she is mated with a black drone, her progeny will be hybrids, but the drones are pure. Why is this? I will try to explain it. The ovaries, or egg-sac, is divided into two parts, as it is very nicely illustrated in "Langstroth on the Honey-Bee," Revised by Dadant, page 56, plate 5. You will notice, where the two channels come together, below it is a round ball, with muscles around it, this is the sperm-sac. Now, whenever she lays an egg for a worker-bee, she will squeeze that ball with her muscles, and fertilize the egg when it comes in position with the ball; but for a drone, she will let it pass without fertilization. That is the reason why drones are pure, and it is also plain that the queen can at will lay an egg for a drone or a worker bee.

Burlington, Iowa.

No. 2.—Bits of Experience, and a Few Questions Suggested by Them.

BY T. I. DUGDALE.

(Continued from page 232.)

We also made experiments with several kinds of mineral wax, to learn if possible if the cost of foundation could not be reduced. All these tests proved unsatisfactory, and it was found that only pure beeswax was a success.

I have since used considerable comb foundation in my work, and have tried full sheets, part sheets, and starters only, in the brood-chamber, and have finally reached the conclusion that if it is increase as well as honey we want, then full sheets are the thing to use; but if honey alone is the object in view, I firmly believe that starters properly used will give equally as good results, and will have a tendency to prevent swarming, as the bees, having been induced to make a start in the sections, do not build comb in the body of the hive so fast, and the queen will use it about as fast as built. Of course, for extracting, I prefer full sheets. Also, it is more labor to look after a colony that has been allowed to build their own combs, on account of too much drone-comb being built, which should be removed and made into wax.

At the close of my season's work with Mr. Nellis, I returned home, and decided to again engage in bee-keeping, which I did by buying upwards of 40 colonies in box-hives. These I transferred to frame hives. I also procured several Italian queens and Italianized them all. Here I had a fine chance to learn something in regard to the distance bees will go in search of nectar. As there was at that time no Italians within 20 or 30 miles of my yard, I saw that season these bees at work at least 3 miles in a direct course from my place, and do not know but they may have gone even farther, and of that distance I can speak positively.

At the close of the following season several colonies belonging to a party 4 miles distant showed the Italian markings

very distinctly. Now, if the bees which I saw at work 3 miles away, and the Italian blood in the yard 4 miles away, did not come from my yard, will someone please arise and say where it did come from?

I also had several strains of Italians in my yard, and during the next 3 years I noticed that the very yellow bees did not winter nearly as well as those darker in color, although they were all prepared alike as nearly as possible, and as it took so much longer for them to get in proper strength to work they did not do as well in storing honey.

I also gave the Cyprian bees a trial for two seasons but got rid of them on account of their being too cross, and capping their honey with such a greasy, water-soaked appearance.

After 3 seasons I sold the bees, which had increased to over 100 colonies, to another party here, and I then engaged in the mercantile business, which I followed for 10 years, but failing health compelled me to again seek some out-door occupation, so I again purchased 4 colonies of bees, and they increased so rapidly that I in a short time found myself in possession of 100 colonies, and then I sold my store and am still caring for the bees.

After having the bees 10 years, the party to whom I sold them had only 2 colonies of pure Italians in his yard, the balance being either blacks (to all appearance) or low-grade hybrids, although the original colonies were nearly all pure Italians. They had been allowed to replace their queens to suit themselves, and if the Italians really are the stronger race, why did they run out, as they were in the majority to start with?

For some years past I have kept only Carniolans, with the exception of a trial with Syrians and the so-called Punics, both of which I have discarded as undesirable for producing a choice article of comb honey.

After much experimenting in wintering out-doors, I now follow that plan exclusively and have not lost a colony during the past 6 winters. Could I have done better than this if I had wintered them in a cellar? I cover the frames with enameled cloth and fill the ⅛ stories on the top with dry maple leaves, to the depth of about 8 inches. This comes very near to the sealed-cover idea, and gives better results than any other plan I have tried.

I use a hive of my own design, with a 1⅛-inch space front and back filled with sawdust, and wide enough to use a division-board on each side, leaving 1⅛-inch air-space between the said boards and outside of hive. I prefer 10 Langstroth frames to the colony, but can use from 1 to 13, as the case requires. These hives are suited to the tiering-up plan, and for extracting they could be used filled from side to side with frames. I also use a slant bottom under my hives, which comes up to within ⅜ of an inch of the frames at the rear end, and is 1⅛ inches lower at the front, leaving an opening 1⅛x12 inches, which I close with an entrance-block, having an opening cut in it ⅜ of an inch high and 8 inches long. During the honey harvest and very hot weather, I remove these blocks entirely, thus giving ample ventilation, which helps to keep down the swarming fever.

I have given 8 Langstroth frames a thorough trial beside the larger number, with the result that I had to feed every colony on 8 frames, while those on 10 required no such fussing and were in better condition when the harvest came on than the others. Now which is the more economical course, to expend money to buy sugar to keep the colonies from starving, thus making an increased amount of labor, or to allow room enough for the bees to store a sufficient quantity of honey to last them?

In regard to the depth of frames, I notice that many seem to advocate one of greater depth than the Langstroth, claiming as their principal reason that a deeper hive is warmer, from the fact that heat rises. Right here I want to ask, do we want that heat generated by the bees to rise, or do we want to hold it down where the bees are? Also, when a colony of bees does not fill the hive from corner to corner, where do they cluster? and when the queen begins to lay in the spring, is it up along the top of the frame, or down near the center? If in the latter place, then what is the result? Would it be better if the frame were deeper, thus allowing more room for the heat to rise into? If so, why cannot a church or hall with high walls be warmed with an equal or less amount of fuel than a room with a lower ceiling?

These foregoing are vital questions, and I leave it to the reader to decide. But having tried several frames of different dimensions, I have now settled on the Langstroth frame, and have thus far obtained better results, all things considered, than with any other I have used, although the entire question of success or failure in bee-keeping I do not consider to be one of either hives or frames. West Galway, N. Y.

(To be continued.)

Several "Kinks" that May Help You.

BY P. D. WALLACE.

Separating Swarms, when two or three cluster together.—If for three swarms, tier up three hives with an entrance to each on a stand; raise the bottom hive an inch from the board to give the bees room to go in; shake the bees in front of the hives, stop the entrances to the two upper ones, and let them settle for half an hour; then take the top hive and put it on a stand, put the second on another, and let the bottom one remain, and your three swarms and queens are separated. I have tried this plan three seasons successfully, but whether a greater number would separate I know not.

A Hand-Barrow.—I will offer an improvement to what I call a hand-barrow, spoken of by a correspondent awhile ago. Instead of using 4x4 scantling as he does, I use two boards 8 or 10 inches wide; slope all from one edge until you get handles on them, then nail half-inch boards on top suitable for one or two hives, whichever you choose. Nail two laths across on the bottom to strengthen it. Leave the frame long enough so the rear person can see to walk. I have used one since I have kept bees, and it is light and convenient. A little boy or girl can carry one end with a hive on it anywhere. This style needs no legs.

Sprayer for Swarming.—A sprayer to cause bees to settle when swarming, is made thus: Have a tin tube made one foot long, and 1¼ inches in diameter. Have a bottom put in punched with fine holes, then you have what the boys call a "squirt-gun." This is handier and better every way than a fountain pump, and costs 10 or 15 cents. It will spray fruit-trees also.

Underground Cellars.—I will suggest a plan that I think is better than any I have read in the American Bee Journal. Build the wall with stone, if possible, as it will be the cheapest in the end. Do not cover it with clay, as it will be too damp; 2nd, the ants will burrow in the roof, and the sand and clay will sift through; 3rd, it will not last long; 4th, it is a big job to cover it properly.

Build a tight floor or celling overhead, then a ridge-pole, and cover it with good boards. Leave a door on one side with hinges, like an outside cellar-door, then cover the floor with 18 inches of chaff. Paint the roof, and it will last a long time, and when it rots you can easily replace it.

How to Use T Tins.—Turn the flat side of the T tins up to the sections, then there will be no interstices for the bees to fill with bee-glue, as you can press the sections together, and they will come out easily.

Richland Centre, Wis.

Making Foul-Broody Hives Safe for Use.

BY J. B. ADAMS.

On page 103, N. T. S. asks what to do with foul-broody hives. As bee-inspector of Boulder county, it has been necessary for me to disinfect hundreds of foul hives, and I have experimented with foul brood for a number of years. I will give N. T. S. the best way to manage that I have found.

I have a galvanized-iron tank large enough to hold a dovetailed hive, and used to boil them, but that injured the paint and caused some of the hives to warp and become open at the joints. I now fill the tank with water, build a good fire under it, then cut out all foul parts of combs and put them into the fire, then put the frames, if there is no honey in the rest of the comb, into the water, and weight them below the melted wax, and boil them hard for at least ten minutes. After all the wax is melted, let it cool until the wax will come off in a cake. Take the frames out, and they are perfectly safe to use again. While they are being boiled, cut what pieces of comb that will pay out of the hive, and put them into the tank, then put a piece of paper or cloth (I use a long sack nearly as long as the hive) on the bottom, saturate it with coal oil and set it on fire. By moving it with a stick all the inside of the hive can be thoroughly heated, but it is not necessary to char the wood. When the wood commences to char, put the cover on, and close the entrance of the hive air-tight. This will smother the flame, and force the heat into all joints and cracks. This disinfects the whole hive at once. Leave it closed until cool.

In my experiments I took a number of hives from an apiary where the lost bees had died two years previous with foul brood. I also scraped some as clean as they could be with a hive-scraper, put bees into them, and the disease developed in all eleven of them with the first brood. This is not according to Mr. McEvoy—the danger is with the germ in the honey. When Dr. Howard (see Dr. Howard on Foul Brood) asked Mr.

McEvoy what he would do if honey were spilled in the diseased hives, he replied that he would clean it off. Now suppose (which is quite liable to be the case) that the honey should run into a crack or joint of the hive, and a bee should afterward put its tongue in and get some of the honey. You had better disinfect, and be sure, rather then run the risk.

If any one wants it, I will give my easy way of curing the disease, and only handle the bees once. Longmont, Colo.

[Surely, many will be glad to learn Mr. Adams' "easy way of curing" foul brood, and he is hereby requested to send it on for publication in these columns, if he will.—EDITOR.]

"Minnick's Metal Hoffman Frame."

BY JAS. A. MINNICK.

A great deal has been said during the past two years about self-spacing brood-frames, and many are the devices invented to bring about a successful solution of this question, *i. e.*, from a small nail driven in the edge of the end-bar, to various other devices, among the best being the Stephens' device mentioned on page 101; but the mostly used of all is the popular Root-Hoffman frame—a description of which is not necessary for me to give. There are many objections to this frame, and it does not accomplish the object intended, *i. e.*, exact spacing. We will notice some of these objections:

1. When the frames are new, the space from center to center is 1⅜ inches; the V edge is not made sharp on the edge, for the reason if made so, the thin, sharp edge will stick to the neighboring frame, and be torn off when a little propolis is plugged into the three-cored space between the two frames; so it is made blunt for that reason. Now it is at once apparent that by the close of the season, quite a lot of propolis will accumulate between the two frames, thereby increasing the distance from center to center, which is easily noticed by the follower being crowded closer to the wall of the hive, ultimately defeating the object intended—exact spacing.

2. Another very serious objection is, that if the weather isn't "rotten hot," the frames come apart with a "snap" and a "jerk," and any bee-keeper knows the result with a colony of hybrids by the time he gets 8 frames pried apart, and, if the apiarist is not religiously inclined, he will prononnce many "blessings" (?) in very strong language, upon the inventor of the Hoffman frame.

3. Another very great objection is, the end of the top-bar has to be made long enough to touch the back of the rabbet, so the bee-space between the end-bar and hive is preserved. The Roots have *partially* overcome this objection by making an *all* tin rabbet, and by *narrowing* the end of the top-bar. This broad end of top-bar partly closes the bee-space between the end of frames and end of hive, and also the "ditch" in the *all* tin rabbet, prevents the bees from *hastily* clearing the rabbets when smoke is blown in.

4. Another objection (which is true of all ordinary hanging frames) is, that when the frame is lifted out, or put back into the hive, unless the apiarist is slow and careful, he is likely to strike the end-bar against the end of the hive and smash more or less bees, and possibly a valuable queen; and again, the frame may get out of square, and the lower corner touch one end of hive, destroying the bee-space at that end, which the bees will glue fast to hive, and at the same time increasing the space at the other end of hive, to be filled in with brace-combs.

Now, I herewith submit a rough pencil sketch of a frame that I have used along beside the Hoffman, full closed end-bar, common hanging frames, etc., for three years, and have over 300 of them in use, and will this spring transfer all combs in other frames to this one. I claim that this frame *entirely* overcomes *all* the objections set forth against the Hoffman frame, and I will explain its advantages, and number them the same as I have the objections to the Hoffman:

1. It is easily understood by the illustration, that a strip of zinc is set in a saw-kerf in the end-bar to take the place of the V edge in the Hoffman, and projects ¼ inch, touching its neighbor the same as the Hoffman, and is much sharper than is possible to make soft wood; and it touches its neighbor at a right angle instead of an acute angle. The bees are not so inclined to put in propolis, as in an acute angle, and they will not glue metal as readily as they will soft wood. If bee-glue is put in, a little side pressure will press the zinc edge through the glue, and it will rest against the wood, thereby *always* securing exact spacing.

2. Now this new frame parts *very easily* from its neighbor, because the smooth zinc cannot be glued so tightly to the next frame as the V edge of the Hoffman. If tin rabbets are used, nothing more than the fingers are needed to separate them.

3. Now instead of letting the broad wood end of top-bar project past the end bar, I instead drive a 6-penny steel brad in, and let it project just enough so the head *nearly* touches the back of the rabbet, which preserves the bee-space at the end of the hive. Again, this nail is not glued fast in the rabbet like a wood bearing; and it does not cover up the rabbet and bee-space, and the bees "get out" at once. A wood rabbet is preferred to a tin rabbet, as there is no "ditch" to hinder the bees from "going at once."

4. Last, but not least, is the small window-blind staple that is driven in the lower corners of the frame, and projects a scant ¼ inch, and always preserves the bee-space at the ends of the hive, and prevents the smashing of bees, and aids in the rapid handling of frames—once used, never dispensed with.

Some apiarists may object to cost of this frame. While the zinc and the saw-kerf may add to its cost, you will notice

EXPLANATIONS.—1, Nail to rest on rabbet. 2, Nails to hold end-bar to top-bar. 3, 3, Zinc piece set in saw-kerf to rest against next frame. 4, Small window-blind staple to preserve the bee-space between the end-bar and hive, and to prevent the smashing of bees. 5, Small nail to fasten zinc. Top-bar is ⅞x1⅜. Bottom-bar, ¼x⅜. Upper part of end-bar is ¼x1⅛; lower part, ¼x1 inch. Frame made to space 1⅜ from center to center.

End Section of the Minnick Metal Hoffman Frame.

that the end-bar is made from ¼-inch narrower stuff than the Hoffman end-bar, and there is no notching out in the upper end of the end-bar, to receive the end of the top-bar, and *vice versa*, the notching the top-bar to receive the end-bar. Again, the tin rabbet is dispensed with, thus reducing the cost to less, probably, than that of the Hoffman.

Some may claim that the nail bearing will be hard to get hold of, and hard on the fingers; but this I find *entirely* a mistake, and is rather better than others in these respects. Others may think the nail will bend down a little, thereby increasing the bee-space above the top-bar when the frames are heavy with honey. This is a mistake also, as I had frames last year that weighed nine pounds, and the sagging was not perceptible.

Some say the zinc will interfere with the honey-knife. Zinc is soft, and will not hurt the honey-knife if touched by it. I have 100 extracting combs, and find it bothers *very little*, if any.

This frame is not patented, nor do I manufacture it except for my own use, but I will send sample frame to any one for 10 cents in stamps. North Anderson, Ind.

The Sunny Southland.

CONDUCTED BY

MRS. JENNIE ATCHLEY, BEEVILLE, TEX.

A Northerner's Trip to the South.

BY C. THEILMANN.

I believe that most bee-keepers are more or less interested in agriculture and horticulture, therefore I will not strictly hold to what I saw and heard about bees on my trip, but will also tell what I have observed otherwise, which will be new and interesting to Northern people at least, who have never been in the South.

I started with a return ticket, for 21 days, from Plainview, Minn.—9 miles from here—Dec. 18, 1894, *via* Kansas City, Mo., and arrived at Whitesboro, Tex., on the 20th, at 3 a.m. Here I had to wait for my train seven hours, though I was in Texas, and as soon as daybreak came, I commenced

to make investigations, besides what I had already learned from a school teacher in the place while waiting at the depot. Our conversation turned on the different crops and fruit, and the "red bugs" (chigoe or chigors) of which Mrs. Atchley wrote when at Greenville. They are described as very minute and very numerous. Tick nature, they will eat themselves into the skin, and sometimes lay their eggs there, which cause hard lumps, and are very itching. They are found all over Texas and part of Louisiana.

After breakfast in a restaurant, I went into some of the stores and found some Texas honey in 5-pound tinpails, which sold for 75 cents. It was not extracted, but honey and comb in a mass. It was dark, and of rank taste. The honey came from C. P. Clements, Queen City, Tex. I did not hear of any bees in this vicinity.

My train started from Whitesboro at 10 a.m., west to Gainesville 16 miles. On the way I saw some small fields of cotton and corn, in the openings, in the shruby, poor-looking timber—called "gross timbers" of Texas—mostly white and black oak. There are also some young, thrifty fruit orchards in this timber, here and there. Here I saw the only thrifty apple trees in Texas, while the ground is of a red, burnt, gravelly, poor looking nature. The timbers are irregular, from one to 20 miles wide, and about 100 miles or more in length, stretched north and south.

Gainesville is a thrifty town of about 9,000 inhabitants. I found there one of my old neighbors, 2½ miles from town, on a nicely located farm of 200 acres, for which he paid $11,000 last year, and for another 320 acres last fall, 3 miles away, $7,500. He had to haul his water when I was there, 2 to 3 miles, and did not know how far he would have to haul it soon, if no rain would come—probably from the Red river, 5 miles away, as nearly all the creeks and rivers had gone dry all over Texas. This man had a fine, improved farm here in Minnesota of 320 acres, with a windmill and a never-failing well of splendid water, a gasoline engine and feed mill—in short, it is as fine a home as any one can wish for. He sold $3,500 worth of small grain to one man in Chicago from last summer's crop, besides considerable at home, and raised a lot of hogs and other stock besides here. The reader will ask, "Why did he go to Texas?" Yes, why did he go? Just because he listened to the flattering, exaggerated reports, and innocently believed them. He sees now that he made a big blunder.

There is far better soil on the west side of Gainesville than on the east. I could not find any bees here. I then started east to Sherman, another thrifty town about the size of the former: 14 miles from here I found another of my old neighbors, on a 1,400 acre farm, for which he paid $24,000 three years ago, and he has lived on it since. He has 200 or 300 acres in cultivation. This is good prairie land—black, waxy land, as it is called. He does not want to raise cotton for 4 cents per pound, ginned, or $1.40 per 100 pounds for picked—with seed in, as it comes from the field; 1,600 pounds of picked, or raw cotton, makes 500 pounds of ginned or cleaned cotton; 500 pounds is a bale, and ½ bale is an average crop per acre. Cotton takes three times the labor corn does. This man raises wheat, oats, corn and hay, which all do well here, but has to seek his own market. The rest of his land is in pasture. He has less stock now than three years ago—more have died than he could raise. Going over his land we came to a place where there were a lot of bones and skeletons. I asked him if that was his boneyard. "Yes, that's my boneyard," was his laughing reply; and further said, "I have lost seven head this fall in the cornstalks. I think it was from the smut."

His stock was in finer condition than any other I saw in Texas, except eight or nine head southwest of Beeville. Most of the stock in Texas was very poor, some in a starving condition.

The next morning he took me to Collinsville, 6 miles west, to my route farther south. This man did not realize his expectations in Texas. He is very industrious and economical, and accumulated, while here in Minnesota, $4,000 or $5,000. He was 10 or 12 years in northwestern Iowa, and accumulated $20,000 or $22,000 more, and then moved to Texas. "I am going to sell if I can, but will keep silent otherwise," is what he told me on our way. "I could buy land here for $12.50 per acre now."

While going along I saw some bee-hives in a fence-corner. We stopped the team, and I went to the house and inquired about the bees. I asked the sturdy lady (the man was not at home) how their bees were doing? "Quite smart," was the reply. How much honey do you get per colony? "O, right smart," she said. With her consent I tried to examine them, but everything was nailed together, even the four sticks on which the hives stood were driven into the ground and nailed to the hives. No examination could take place, and lifting was in vain.

Arriving at Collinsville, I had two hours before my train was due. I inquired for bees, and found that one man had 10 or 12 colonies about 80 rods from the depot. I went there, but was told that the bee-keeper was sick in bed, caused by a bullet which he injected into his body with a revolver, trying to commit suicide. But he gave orders to let me examine his bees. I had to clear away the weeds and rubbish around them before I could get to them. I opened a number of the hives, and they were in bad condition, with but little honey; but some of them were working quite freely in the field, bringing in pollen and honey. His neighbor told me that those bees had not stored any surplus honey for four years.

The land here is very sandy, and well water bad. One drink of it spoiled my taste and appetite for a number of days. This was the case with well water wherever I drank any all over the State. People that have lived in Texas for some time, claim no bad effects from the well water, though many have cisterns for the house and drinking water, but all of it is very warm—about 60° or more—for drinking.

I arrived at West Point at midnight, and had to wait for the train until the next noon. Here I saw a species of thistle in full bloom, on which the bees were busily engaged. The leaves were spread flat on the ground, with a dark green foliage, and the snow-white bell-shaped, single, one-inch-or-more in diameter flower, stood right in the center, with a stem about 2 inches high. It was abundant all over the streets and waste places, and was beautiful.

Here the Colorado river bottoms produce the most corn and cotton per acre of any place I saw in Texas; but here and further south no oats can be raised to any advantage. It gets rusty, as a rule.

I arrived at Flatonia at 2 p.m., and had to wait for the train until 6. Strolling around the outskirts of the town, I saw some peach trees and many shrubs in full bloom; and when a lot of playing children saw me coming, with my fur cap, they stood on their toes and exclaimed, "What's that? what's that?" It was near Christmas Day, and when they saw I was not Santa Claus, they commenced laughing and shouting.

Going on a little farther I heard the sound of bees, and soon found their home in a little garden before a house. A lady, looking through the open window (it was warm—about 85°), was asked how the bees were doing, "Right smart," was her answer. How much honey do you get in a season? "Quite smart," was the reply. By this time the owner of the bees came out and walked with me on the sidewalk, and told me that his bees did not store much houey last summer, because they were not cut last year.

From here I made a side trip *via* Houston to Crowley, La.—166 miles westerly from New Orleans. This is as fine a rice country as can be found anywhere. The country around Crowley for 30 and more miles is just made for rice culture, and all of my friends and acquaintances who live here, are doing and prospering well on rice, and like the place well. Three million bushels were shipped in 1893 from here. Fruit trees make immense growth here. The place is seven years old, and has over 2,000 population. Christmas here, as well as in Texas, is celebrated with fireworks by the youths, besides the festivities that we have in the North. The negroes keep it going all night.

Starting back on the same route, 345 miles, I did not see Houston and the country around it, as the train went through at night both times, but I am told that there is a good country around Houston, which is quite a city, and has a fine depot. There are a number of artesian wells here, about 400 feet deep, which are said to furnish good water. I did not get a taste of it.

I arrived at Beeville on Dec. 26, at 6 p.m. Myself and another bee-keeper (Mr. Koch, from near Austin, Tex.) were taken by Mr. S. D. Hanna to his nice residence, where we were welcomed by his clever wife and family. Mr. Hanna and his son Henry are bee-keepers. Being with bee-keepers we felt at home, and after the inner man was satisfied with a good supper, we had an interesting time with bee-talk until a late hour, when we were furnished with a splendid bed, and had a good rest after the long ride on the cars.

Theilmanton, Minn.

(Concluded next week.)

Back Numbers for 1895 we can furnish to new subscribers until further notice, if they will let us know when subscribing. We will begin the subscription Jan. 1, 1895, if you say so when sending $1.00 for a year's subscription.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Spreading the Brood—Out-Door Wintering.

A little let-up in the flood of questions gives me room to get in here an answer to Frank Coverdale's question on page 199—"Why not say when the queen fills as much comb with eggs as the bees can fully cover, then I would spread the brood?" Well, Friend Coverdale, if I were very hard up for a reason, I might say that on looking at the answers on page 210 I find only one out-and-out advocate for brood-spreading. You want outside comb of larvæ and eggs to be changed for inside sealed brood, because the former may be chilled outside. In spring the cluster is constantly becoming larger, and wherever it is warm enough at the outer part of the cluster for the queen to lay, is it likely to be too cool for the brood? Admitting that such might be the case, do you find central combs containing all sealed brood, and outside frames of the other kind? Are they not usually pretty thoroughly mixed?

Edwin Bevins asks on page 200 what I would think of his plan of wintering at Marengo. If I could be assured of my bees having a good flight once a month, such as he says he has, I should call the plan a good one. But with the possibility of no flight from early in November till late in March, I am getting somewhat hopeless about out-door wintering here. Still, I don't know what may be. C. C. M.

Oilmeal and Other Substitutes for Pollen.

I have been grinding some corn and oats for the bees to work on, but this week I got some oilmeal and left a bag outside for a few hours. You ought to have seen the bees work on it! Is it a good thing to supply them with pollen so early in the spring? If they take oilmeal, or more common, linseed meal, in preference to corn and oat meal, is it a good idea to supply them with it? A. R.

ANSWER.—I don't believe you'll do any harm by giving the bees any substitute for pollen on which they will work. I've tried a good many different things, but I'm not sure that I've tried oilmeal. When they can get natural pollen you'll find they'll neglect the substitute.

Finding the Black Queen in Italianizing.

I find it very hard to find the queen in a full colony of black bees. I want to Italianize my bees, and must find the black queen before introducing the Italian. What is the best way to go at it? W. E.

ANSWER.—Generally there isn't much trouble about finding a queen, but the thing *can* be managed so as to be a very hard job. If I wanted to get a colony in shape so I couldn't find the queen, I should give them a lot of smoke, and then I should handle them quite roughly and jar the combs. On the other hand, if I wanted to find her, I should handle them very gently, giving only a little smoke, so as to avoid getting them to running. If they get to running like a flock of sheep, you may about as well give it up for a bad job, and try it some time again when all is quiet. Indeed, if you don't find a queen, even when they're quiet, after looking them over the second time, you may save time by letting them alone for half an hour or more.

Here's a little trick that may help: Put an empty hive beside you. Take out carefully the first frame on the side next you, look on one side and then the other for the queen, although if there's no brood on this outside frame there is not much chance that the queen will be on it. You'll more likely find her on one of the combs that contain brood. Put the frame in the empty hive at the side nearest you, but don't put it so close to the side that the bees will touch the wood, leaving an inch or two between the comb and the side of the hive. When you have looked over the second frame, put it close up to the first one in the empty hive. Put the third frame an inch and a half or more from the second, then the fourth close to the third. Thus you see you have the combs in pairs. When about half the frames are in the empty hive, you can leave the others in the old hive, but put them in pairs, just as you did in the empty hive.

Now your combs all being in pairs, you are pretty sure, on whatever pair the queen may be found, that she will be in the middle of the two combs, and not on the outside. Commence again with the first frame, lift it up, and as you do so, look at the side of the second comb still in the hive, and you may happen to see the queen there. If not, examine carefully the comb in your hand on the side that was next to the second comb, then examine the second comb, and proceed thus with all the pairs.

Sometimes this is done: Put the combs in two or more different hives, and let them stand for a time—those which have no queen will begin to show signs of uneasiness, while those with the queen will remain quiet. Then you can examine the quiet ones, and perhaps re-divide them.

Here's a way you may like still better: Oblige the bees in some way to pass through a queen-trap or queen-excluder. The workers will get through, but the queen will not, and can then be caught. One way to manage this is to shake or brush all the bees off the combs into an empty hive or box. Then put the combs without bees in the hive, and close the hive up so that no bee can get into it without passing through excluder zinc. This may be a queen-trap at the entrance, or a queen-excluding honey-board may be put on top of the hive, a bottomless empty hive placed over this, and the bees shaken in. If a queen-trap is used at the entrance, of course the bees must be shaken down in front.

Wants to Prevent Swarming this Year.

I have five colonies of bees now (March 27) in good condition, hives full of brood-comb, and I do not want them to swarm until next year. Can I prevent it by buying bee-entrance guards, and leaving them on the hives until danger of swarming is over? C. S. W.

ANSWER.—No, a queen-trap or a guard at the entrance that will let workers pass, but not a queen, will prevent a queen going off, but it will not prevent the bees from swarming, and they'll continue to swarm more or less till the old queen is killed and a young one present, and then if the young one is kept penned in she will be a drone-layer. But with a queen-trap at the entrance you can catch the queen when they swarm, then you may try some of the ways given for the management of such swarming colonies.

Questions on Spacing of Frames.

1. What spacing between frames would you recommend?
2. Would you make any change upon the spacing when preparing for winter, say in the fall, for the storing of winter supplies?
3. What should be the inside width of a single-story brood-chamber in which colonies spend both summer and winter—for 10 frames and for 9? Canada.

ANSWERS.—1. The majority now have frames spaced 1⅜ inches from center to center. Some space 1⅓, and a very few still less than 1⅜. If I should go either side of the 1⅜, it would be toward the larger spacing, but I'm not sure there's any advantage in anything wider than 1⅜.

2. Taking all things into consideration, I should use the same spacing all the year round.

3. For 9 frames, taking 1⅜ as the distance for spacing frames, it is easy to figure eight times that as 11 inches, but that's allowing a space only on one side of each frame, and another space must be added, making 11⅜ inches. But in actual practice it is found much better to have additional space in which to hang a dummy for the sake of getting out the first frame more easily. The inside width of the dovetail hive is 12⅛ inches, and I should certainly not like anything smaller, although it might do no harm to make it a trifle wider. For 10 frames, add 1⅜ inches for each additional frame, which would make the inside width of a 10-frame hive about 14⅞ inches.

Only One Cent a Copy for copies of the American Bee Journal before Jan. 1, 1895. We have them running back for about 10 years. But you must let us select them, as we cannot furnish them in regular order, and probably not any particular copies. Just send us as many one-cent stamps as you may want old copies, and we will mail them to you.

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GEORGE W. YORK,
EDITOR.
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Mrs. Jennie Atchley	"The Sunny Southland."
"Gleaner"	"Among the Bee-Papers."
"Bee-Master"	"Canadian Beedom."
Dr. F. L. Peiro	"Doctor's Hints."
Rev. Emerson T. Abbott	"Notes and Comments."

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Editorial Budget.

Mr. Joseph Ross is wanted. Any one knowing where he is, or if this meets his eye, please notify his mother, Mrs. M. Ross, Decatur, Wise Co., Tex. Mrs. Ross requests this notice given, and wrote that her son, who is a bee-keeper, left Decatur in 1891. She heard he was in Louisiana.

The "Golden" Feeder, illustrated and described on page 213, seems to merit considerable favor, so much so that many are writing Mr. Golden for one as a sample. He does not wish to make them for sale, and writes me that if any one will send him 25 cents he will mail in return a good, clear photograph of the feeder, from which any boy 10 years of age can make it. Address as follows: J. A. Golden, Reinersville, Ohio.

Bee-Paralysis.—On page 114 it was requested that the American Bee Journal co-operate with Gleanings in offering to publish the names of those dealing in bees or queens, who would consent to at once destroy all colonies when found to be so affected. In response to that request and agreement, only one dealer has been heard from—Mr. W. H. Pridgen, of North Carolina. He says:

"I have never had a colony of bees affected with any disease, and if I ever do have such, I shall not sell bees or queens until it is cured. W. H. Pridgen."

Bee-Culture in Colorado.—Judging from the following, written by Mr. Wm. M. Barnum, of Denver, Colo., the bee-keeping industry in that State is greatly on the increase:

The statistics of our great State for the year 1894, place the number of pounds of honey produced for that fiscal year at 250,000, valued at $25,000—which is a low estimate. The State was amply able to supply itself, and a number of thousands of pounds were sent out. The business is growing with remarkable rapidity; and the State is surely destined in a short time to become one of the leading honey States of the Union. Wm. M. Barnum.

Good for Colorado! But when honey is used regularly, as it will be some day—in every family everywhere—then there will be a demand that will tax the honey resources of each State to their limit. Better get ready for the "good time a-coming."

When it is known that one honey-seller disposed of about 50,000 pounds here in Chicago, the past winter; and that another has been supplying 200 grocery stores, often duplicating the orders, some idea of the possibilities of honey consumption may be realized. Why, Chicago alone could use every drop of pure honey produced in the great State of Illinois every year, if it were properly and generally distributed to the people! And the city people would be the better for it, too.

For a few years it might be a good thing to spend more time in learning to sell honey rightly, and less time in trying to produce an enormous amount and then *give* it away. And yet, just now, as always in the past, it is underconsumption and not overproduction of honey.

Pure honey, properly put up and presented to the consumers, will "go." But there must be an assurance of its purity, else any sales will not easily be made.

Honey as Food and Medicine.—A new and revised edition of this 32-page pamphlet is now issued. It has 5 blank pages on which to write or paste recipes taken from other sources. It is just what its name indicates, and should be liberally distributed among the people everywhere to create a demand for honey. It contains a number of recipes on the use of honey as food and as medicine, besides much other interesting and valuable information. Prices, postpaid, are: Single copy, 5 cts.; 10 copies 35 cts.; 50 for $1.50; 100 for $2.50. Better give them a trial. Send all orders to the Bee Journal office.

The Standard Dictionary.—Whoever has had occasion to look at a dictionary for some word connected with the pursuit of bee-keeping, has in the majority of cases been doomed to disappointment. If he found the word he was not certain of finding a correct definition, but in too many cases the word was not to be found at all. Now, however, in the Standard Dictionary, whose second and last volume has lately appeared, the student of apiculture may look with some hope of success, for its publishers have had the good sense to consider apiculture of sufficient importance to include in its corps of editors a practical bee-keeper—one who has for many years been familiar with the literature of bee-keeping—Dr. C. C. Miller, of Marengo, Ill.

Not only are the old, familiar terms of bee-keeping to be found, but the Standard is an up-to-date dictionary. Look under the letter S, and you find "slumgum. The residue of propolis, cocoons, etc., after beeswax is extracted from honey-combs." In their proper places you will also find comb-foundation, field-bee, hiver, Italianize, pipe, Good candy, Scholz candy, etc. It is pre-eminently a bee-keeper's dictionary. Of course, it would be nothing strange to find errors or omissions, for in the matter of the nomenclature of bee-keeping the editor was working mainly on virgin soil, and dictionaries are not made in a day. But an immense advance has been made.

The question may be asked, how does it come that bee-keeping has such prominence in this dictionary—a prominence justly deserved, but never previously given in any other work of the kind? The answer is, that no more prominence has been given to it than to the many other special departments. In each department some one was chosen as editor who was entirely at home in that department, not trusting to a lawyer to give definitions of terms in botany, nor choosing a botanist to give the language of chess-players. Think of 275 editors and specialists!

Of course no pocket edition can be here under discussion. The Standard is an immense work. It is published either in one or two volumes, with a total of 2,338 pages, with 5,000 illustrations, and in the fulness of its vocabulary it is far in advance of all others. Webster (International) has 125,000 vocabulary terms; the costly Century, in six volumes, has 250,000; while the Standard has by actual count 301,865, besides the Appendix with 47,468 entries.

Want of space forbids describing fully any of the many excellences of this magnificent work, such as finding the usual meaning of a word immediately after its pronunciation, the exact pronunciation of each word being given by means of what is called the scientific alphabet adopted by the American Spelling Reform Association; the many quotations given for the better understanding of the meanings; the use of capitals for the initial letter of only such words as are to be always spelled with capitals; the very full treatment of synonyms and antonyms; the use of the German double hyphen to distinguish compound words from those merely divided into syllables; the valuable tables given of coins, fruits, flowers, measures and weights; the Appendix of proper names all in one table, so that you don't need to look through several tables to see whether a word belongs to biography, history, geography or fiction; not to mention others. Among the innovations is that of having lists of the technical words used in particular trades. Under "blacksmith" come some 70 words pertaining thereto; under "carpentry" 275, and so under foundry, plumbing, printing, etc. The dictionary cost nearly $1,000,000, and five years of labor.

Scholars in this country, and England as well, hail the work as a monument well fitted to the close of the 19th century. It is emphatically the people's dictionary, and undoubtedly for long years to come the Standard will be the standard.

The publishers of this stupendous work are Messrs. Funk & Wagnalls, 30 Lafayette Place, New York, N. Y.; and the General Western Agents are The Fuller Book Co., 79 Dearborn St., Chicago, Ill. For any further information desired, address either the publishers or the general agents.

To Encourage the Use of Honey is a theme that deserves some hard thinking. How to do it—that's the question. In one of my exchanges I recently read this paragraph touching on the subject:

If the bee-keepers, through their associations, could establish agencies in the great central markets for the sale of their honey by which consumers could be convinced of its purity, an increased demand might be made for the extracted product, and through it as well a larger consumption of the comb honey. The use of honey is not what it should be, and would be encouraged by such a move.

To be "convinced of its purity"—that's what consumers want. There's no trouble to sell honey if once you can thoroughly convince the consumer that you have the genuine thing. That's why the home market is better than any other—you deal with people who know you, and you have less work to do in the "convincing" business.

True, "the use of honey is not what it should be;" and he who creates or enlarges a demand for the pure article is a benefactor not only to bee-keepers, but to consumers as well.

Why would it not be a good plan for all the large honey-producers in a certain neighborhood to select the best man in their number, and send him to some large city for the express purpose of retailing their crops during the fall and winter? The honey could be graded, and a common label or stamp used, guaranteeing purity and satisfaction. I believe a good trade could thus be worked up in many cities, which would annually take large quantities of honey to supply.

I would like to see this plan tried, as outlined above, if thought worthy.

Life is Too Short.—The Geneseo, Ill., News gives some excellent advice in one short paragraph. Read it, and then never "go a-skunking:"

Life is too short to spend it in hating people. There are so many people in the world that are pleasant. Don't pause to hate; but if you find a man you can't get along with—the music of whose voice you cannot win—just let him alone. You can easily supply yourself with a friend in his place. Don't think about him, for wrath, even if unexpected, works disaster to you. Rage and hate burn you up inside, and make you old. Anybody prefers a pretty squirrel to a skunk; yet who would spend half his life running around after skunks and kicking them because they are not squirrels?

Among the Bee-Papers

Conducted by "GLEANER."

BOTTOM-BOARD FEEDING.

C. Theilmann speaks enthusiastically, on page 201, of the plan of tilting up the front of the hive and pouring the feed in at the entrance. If I remember rightly, Dr. Miller at one time reported using this plan on a large scale, and was well pleased with it, till he found out by close watching that too many dead bees were carried out at every such feeding.

THE FUTURE OF BEE-KEEPING.

The Review is somewhat taken up with this question. L. A. Aspinwall thinks improvements will enable specialists in bee-culture to remain such, the chief desiderata being "the prevention of swarming and a perfect system of wintering in the open air." Eugene Secor thinks the survival of the fittest will solve the problem, and that "flowers will continue to secrete nectar and apicultural enthusiasts will continue to be born." C. P. Dadant says that so long as crops are raised, honey can be produced, or else farming itself would become a side-issue. To this, Editor Hutchinson makes the rather gloomy rejoinder, "If all the natural sources of honey are cut away, and the crops that we raise are not honey-producing, then where are we?" But bee-keepers are a hopeful set, and we may expect that new plants will come into the farmer's program that *are* honey-producing, such as crimson clover and Lathyrus sylvestris, which are now having quite a boom.

J. F. GATES' MANAGEMENT NOT FOR TRANSFERRING.

This is favorably mentioned by Mr. Abbott on page 206, but is in no way intended, as might be gathered from Mr. Abbotts' remarks, to take the place of transferring. Mr. Gates does nothing in the line of transferring, but keeps his immense box-hives with their colonies from year to year, and that's all he does keep from year to year. He gets no honey from these box-hive colonies, only swarms. The swarms are put into small hives to give all the honey possible, but are not kept over winter. The plan is well worth thinking over.

WHITE AND ALSIKE CLOVER.

W. J. Cullinan complains on page 187 that "pastures are grazed so closely as to afford even the persistent and low-growing white clover but little chance to bloom." There must be false economy on the part of the stockmen, for if clover is grazed too close to bloom, it is grazed too close for its greatest total yield as pasture, and proper grazing is usually considered as a good thing for the bees because it lengthens the season of blooming. His remarks on Alsike are good, and his estimate of the increased yield of seed over red clover are strongly endorsed by Waldo F. Brown, in Prairie Farmer, Mr. Brown thinking Alsike will yield nearly double as much seed as red.

PREVENTING PROPOLIS ON TOP-BARS.

On page 191, J. W. Hoffman thinks the sticking of propolis on top-bars would be prevented by covering the top-bars with tin, but he doesn't give any reason for thinking so. Before going into anything of that kind largely, I should advise a trial on a small scale. If he could see the pounds of propolis I've scraped off tin, I think his faith in the scheme would weaken.

GERMAN BEES SAME AS BLACKS.

G. H. Allen, page 191, speaks of his gentle German bees and his neighbors' irascible black bees. Lest some beginner might think of getting German bees as something new, it may be well to say that Germans and common blacks are all the same.

VIRGIN MOTHERS PRODUCING FEMALES.

Without meddling with the other questions in the same paragraph, I'll tell Mr. Abbott where he can find an answer to his last question on page 222. Turn to American Bee Journal, Vol. I, page 121, and you will read: "Prof. Von Siebold demonstrated clearly that not only do living larvæ occasionally issue from a portion of the unimpregnated eggs of the silk-worm, and develop as moths—some male, others female; but that in various species of butterflies the virgin females *regularly* lay eggs which, not partially only and occasionally, but uniformly and without exception, produce females."

HANDLING BEES IN COLD WEATHER.

"Bee-Master" takes J. A. Green to task for wanting to brush bees when they don't readily fly. They may not need to do anything of the kind in Canada, but farther south it sometimes happens that a man does want to do that very thing. No matter if it would be better not to have to do it, if the occasion comes to need it, it's a good thing to know how.

THE TRUE TEST OF PURITY OF QUEENS.

On page 181, H. F. Coleman revives a topic that has been much discussed. It may be well to recall that a very large number did not agree with Mr. Coleman's views. Admitting that the true test is the royal progeny, how are we to judge by that? For at the time of the controversy it was stoutly maintained that there was no such thing as a queen that would invariably duplicate herself? Pure Italian queens imported vary from light to very dark. Will Mr. Coleman tell us how, by looking at a young queen, he can tell whether it's mother is all right?

THE BRITISH BEE JOURNAL HAS RIGHTS.

I wish Bro. Abbott wouldn't be too restrictive, and would allow the British Bee Journal to feed in the open air if it wants to. (See page 222.) Granted that in the majority of cases it isn't the best way, still if said journal were not so many miles away I think it might show pretty good reason for it at particular times. Here's a nice, warm day when bees are busy flying, but there isn't a thing for them to do but try to rob from each other—there have been several such days this spring; there are no neighbors' bees within reach—why isn't it a pleasant thing to give them something to do? To be sure, the strong colonies get the lion's share—so they do if they're working on flowers, but you're not feeding to supply the needy. Is it certain that such bees will wear out faster

than if fed in the hive? When fed in the hive don't they always set out on a tour of investigation, and fly about a good deal more than the short distance from the hive to the open-air feed-dish?

Canadian Beedom.

Conducted by "BEE-MASTER."

Bees and Strawberries.

In further confirmation of what Mr. Abbott says on this subject on page 190, it may be remarked, that in a little work prepared to accompany a set of illustrative diagrams published by the British Bee-Keepers' Association, the following passage occurs:

"Fig. 53. Strawberry. A, anthers; B, stigma. For fertilization, insects are required, since the stigmas are ripe long before the pollen is produced. Bees especially, walking over the bloom seeking honey, carry pollen to the stigmas. Where fertilization takes place, the strawberry develops, but if it fail in part we have there a hard, shrunken, and greenish mass. Any dish of strawberries examined will give instances. Without this fertilization no crop follows. To produce a single perfect strawberry, from one hundred to double or triple that number of fertilizations must be accomplished. In the blackberry or raspberry, every little rounded mass (*drupel*) has its stigma, which an insect has visited."

How clear it is from all this that our fruit crops are aided not a little by the presence of bees! Dr. Johnson, the great lexicographer, used to say, "No doubt God Almighty might have made a better fruit than the strawberry, but it is quite certain he never did." Well, for this best of fruits we are indebted to "the little busy bee." No bees, no strawberries.

Hon. Eugene Secor is quite right in supposing the wind to be the chief agent in pollination in the case of a large multitude of flower blooms. The wind and insects are the two servants upon whom flowers are dependent for the performance of this work. Wind-fertilized, or anemophilous flowers, are, as a rule, honeyless, scentless, and inconspicuous. But flowers that require the aid of insects must invite their visits: hence honey is offered, sweet perfumes attract, and fine colors reveal.

The experiments of Darwin on "Cross Fertilization" are very interesting, especially those which disclose the precautions taken by Nature to prevent in-and-in breeding. Flowers have frequently about them wonderful devices for making insects, and amongst them, bees especially, the instruments of procuring for them cross fertilization. In this, as in all parts of the Creation, we see evidences of design, which loudly proclaim the presence, power and wisdom of a Designer.

More About Moving Bees.

Having read Edwin Bevin's article on page 114, I will give an account of a trick I did last summer, in the moving line. I had five colonies in one yard, which I wished to move to another, a few rods distant, so one cool morning I closed the entrance of one of the hives with wire-cloth, the entrance was ⅜ inch high and 13 inches wide, so I thought this would give sufficient ventilation. I moved the hive to the other yard, intending to place a board in front of the hive and let them out the next morning to mark their new location. As I had read of doing so in some of the bee-papers, I did not think there was any danger, so I went about my other work till dinner time, when I looked to see how they were, and found them trying to get out, but seemed to be all right, so I left them till night.

I came home to supper, and went straight out to the hive, when, to my dismay, I found honey running out the entrance, bees all dead, and the combs all down in a heap in the middle of the frames. The other four colonies staid where they were till the present day. But if I ever do move them, I shall cover the whole top of the hive with wire-cloth, and raise the board cover a little, then with a piece over the entrance, surely there will be enough ventilation.

We learn a great deal by experience, in bee-keeping, although sometimes it is rather expensive.

EXPERIENCE WITH A QUEEN.

Last winter I had a colony of Italians that did not winter very well—there did not seem to be many bees left in the spring, and apparently no queen. There was no brood on June 1, so I concluded there was no queen, and having a swarm of blacks issue shortly after, I hived it in this hive with the Italians, and I tell you they tried their best to keep them out, however the blacks took the fort and held it.

Some time after this, about 3 or 4 weeks, maybe, I noticed Italians coming out of this same hive, and on examining it found an Italian queen and nearly all Italian workers. Now the question is, whether this queen was in the hive all the time, or did she come from some other by mistake?

Harwood, Ont. GEO. MCCULLOCK.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Do Bees Hear?—"I don't think they can."—Prof. Cook's answer to the query on page 194.

When I read the above, I turned to the subject in the "Bee-Keepers' Guide," and I must confess that I am at a loss to know how to reconcile some of the statements there with the flat denial found above. My friends Cook and Cowan both seem very averse to recognizing any fact as being true which was set forth by the late Mr. Cheshire, but I am very much inclined to think he was correct in this special case, at least. Prof. Cook says that Mr. Cheshire gives no proof that the pits in the antennæ are organs of hearing. Now, I was laboring under the impression that Mr. Cheshire had made out a very good case, and I suggest that while the subject is fresh in his mind, the reader turn to his book and read over carefully all he has to say.

Prof. Cook further says that the pits which Cheshire describes are not ear-like in their structure, and that nothing answering in the least to ears, structurally, has yet been discovered. The question arises, what does he mean by "ear-like?" I will admit that there is nothing that bears any resemblance to *our* ears, but are ears like ours the *sine qua non* of bearing? Other animals hear which do not possess any organs that bear any resemblance to ears as we ordinarily think of them. Take the following statement from Sir John Lubbock as evidence of this fact:

"Different plans seem to be adopted in the case of other animals. In the Crustacea and Insects there are flattened hairs, each connected with a nerve fiber, and so constituted as to vibrate in response to particular notes. In others the ear cavity contains certain minute solid bodies, known as otoliths, which in the same way play upon the nerve fibers. Sometimes these are secreted by the walls of the cavity itself, but certain Crustacea have acquired the remarkable habit of selecting after each moult suitable particles of sand, which they pick up with their pincers and insert in their ears."

Now, the organs here described bear no resemblance to ordinary ears as to structure, but the animals hear with them all the same. The truth of the matter is that Prof. Cook admits that bees can hear, in the scientific definition of that term, when he says, "That insects are conscious of vibrations which with us cause sound, I think no observing person can doubt." "There is some reason to believe that those delicate touch organs may enable them to discriminate between vibrations." Vibrations with us do not "cause sound," but *they are sound*, and any animal which can "discriminate between vibrations" can hear, with all that this term implies. In other words, hearing is simply gathering up and focalizing vibratory motion, and whatever can discriminate between the slow and rapid vibrations can *hear*. I also insist that the ability to make what we call a noise implies the ability to focalize the vibrations which that noise is. If the theories of the evolutionists are true, and I believe they are now admitted to be true in the main, I do not see how one can escape this conclusion. Therefore I would be glad if Friend Cook would rise and explain why he says, "I don't think they can."

A B C of Bee-Culture.—This is the fine cyclopedia of bee-keeping by A. I. Root, containing 400 pages and nearly 200 engravings. The regular price is $1.25, postpaid, but until April 20 we make the following very liberal clubbing offers on this book: The American Bee Journal one year and the "A B C" bound in cloth—both for only $1.80; or the parchment cover (very heavy paper) "A B C" and the American Bee Journal one year—both together only $1.50. Remember, April 20 is the limit on these offers. Better order at once if you want a copy of this excellent bee-book.

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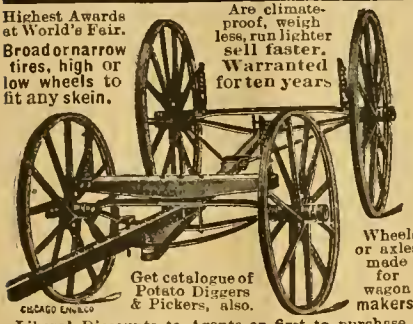

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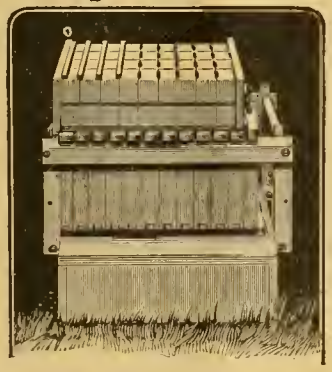

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T. F. BINGHAM, Abronia, Mich.

12A *Mention the American Bee Journal.*

General Items.

Working on the Fruit-Bloom.

Bees have been busy the past week on fruit-bloom, which remains out much longer here than at the North. The weather has been fine—warm and moist—and the bees have worked the pear, plum and peach bloom for all it is worth, thoroughly fertilizing it, thus insuring its setting well. Titi and dewberries are blooming. There are no cherries, currants or gooseberries in this part of Florida. I've not seen an orange or lemon leaf since the freeze.

MRS. L. HARRISON.

St. Andrew's Bay, Fla., March 30.

Wintered Very Poorly.

My bees have wintered very poorly. They are very weak in bees. I never before lost so many bees. They came out of the hives and died in the cellar. R. MILLER.

Compton, Ill., March 30.

One of the Finest Winters.

Our bees have been carrying pollen the last four weeks. Our fruit (peaches and cherries) are in bloom. We have had one of the finest winters for a good many years, and the bees wintered well.

CHAS. SEELIGER.

Walla Walla, Wash., March 30.

Starvation and Cold Did It.

We had no honey last year, and 75 per cent. of the bees are dead this spring. Starvation and extreme cold weather (28 degrees below zero) did the work for those that were fed plenty. I have only six colonies left, and half of them queenless. It is still dry, but winter is about gone, and we hope for better things ere long.

JAS. B. HUNGATE, M. D.

Weeping Water, Nebr., March 23.

Hard Winter on Bees.

The past one was a hard winter on bees on the summer stands, about one-third of them being weak in bees, but with plenty of honey and plenty of diarrhea. My bees had it badly, but are better now. I have lost 15 per cent. of mine with that disease, but have enough left yet. Bees had not many flights, yet we had nice sunshine, but too windy for the bees to fly. They have gathered pollen two days now.

M. J. KISTLER.

Collingwood, Ind., April 10.

Bees Wintered All Right.

My bees have come through the winter all right, and bees in general have wintered well, as far as I can learn. My bees did finely last season, there being a steady flow from spring to fall, with the exception of three or four weeks, the principal flowers being willow, apple bloom, Alsike clover (which I think a good deal of), and a weed that grows on burnt ground that has creamy-white flowers, and basswood; with the fall flowers of asters and golden-rod, and lots of other flowers of less importance.

C. W. GERRISH.

Rochester, N. H., April 2.

Bees Ready for Business, Etc.

Bees are doing well, and are in good condition for business when the time comes. Much has been said and written about different kinds of hives. I have the dovetail hive with the improved Hoffman frame, and the Langstroth hive and 8-frame. My choice is the Langstroth pattern 14 inches wide, inside measure, which gives room for nine frames and a division-board. A case for this hive holds 28 4¼x4¼ sections laid crosswise instead of lengthwise. No bee-

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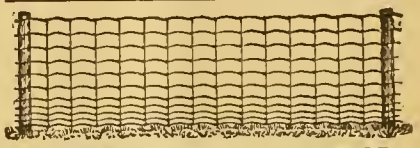

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space is needed over the top-bars. Bees work well this way, and the section-case comes off easily, and is free from propolis. The section-case is wound up with a key, using binder twine, and doing away with nails and wedges. R. HOWELL.
Gillett, Wis., April 6.

Heavy Loss of Bees in Missouri.

My health has been very poor for the past two years, so much so that I could not attend to my bees. Ninety per cent. of all the bees in Ray and Caldwell counties are dead. My own losses are 42 out of 50. All the bees that were in the box-hives—12x20 and 12x30—are dead—not one left, as far as I have heard. We have had a continued drouth for 10 months. The coldest day here was 23 degrees below zero.
C. L. BOWEN.
Louella, Mo., March 28.

Hard Winter for Bees.

The winter has been a hard one for bees in this section of the country. My 16 colonies wintered on the summer stands in eight chaff hives, with a super full of sawdust on top. They nearly all had the diarrhea, although they had cleansing flights Dec. 15, Jan. 8, Feb. 19, and March 1. The first pollen came in April 3. On March 31, one of the worst affected swarmed out, and the queen was put back three times; they had honey in the hive. A few days after the colony was dead. NIELS N. ALLING.
Perth Amboy, N. J., April 5.

Loss About Two-Thirds.

I had 48 colonies last fall, and have lost all but 17. They all had plenty of honey.
MORTIMER DAVIS.
South Avon, N. Y., April 9.

Bad Year Proved a Blessing.

Last year was a bad year for bees in California. But it proved a blessing to us in one respect, by thinning out some of the bee-keepers, or better called "bee-exterminators," who give their bees almost no care whatever. The heavy rains this winter will insure us a good honey crop this time.
Claremont, Calif. L. J. OWEN.

Small Loss in Wintering.

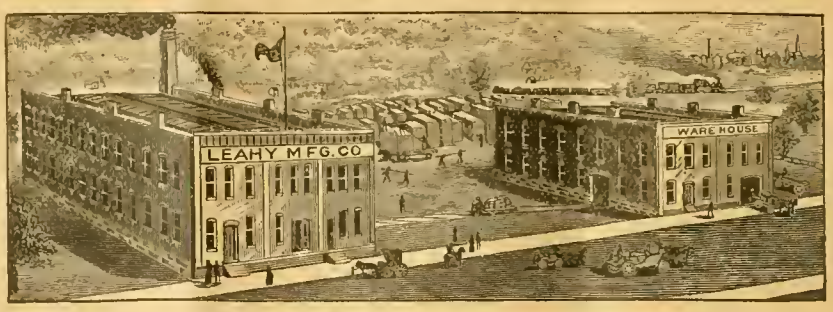
The winter has been very severe, but bees seem to have wintered fairly well—the loss being about 3 per cent. They have been confined to the hives about 100 days, and wintered on the summer stands. I examined some colonies yesterday, and found to my surprise that they had not consumed more than 5 to 8 pounds of stores. I have one-third of my bees packed in double-walled hives, and the rest in single-walled hives, and I find as usual those in single-walled hives have wintered best.
D. M. KETCHAM.
Newark, N. Y., April 6.

Wintering Bees Under a Haystack.

In reply to the editorial on page 104, I would say that the pieces of 2x4 I used were 8 feet long. I have no set time for putting away the bees or taking them out in the spring. It depends upon the weather. I generally winter 10 colonies. I have put them in a haystack for 5 years in 13, and never lost a colony when put under hay. What few bees died I believe died from old age. In the spring there is no moldy comb. They seem to have been perfectly dry all winter. The place must be frost-proof, and the hay will absorb all the moisture.
Humphrey, Nebr. R. N. LEACH.

Beginning with Bees.

I am no longer a youth—some may, and do say that I am too old to start in the bee-business, but as I have a young family (the second edition, ranging from 11 years to 9



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Working Wax into Foundation by the lb. **a Specialty.**
Beeswax wanted at all times. I pay the highest price, and sell Foundation at a low margin. Send for Samples and Prices, to—
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months), I think there is hope for me in bee-culture. My principal reason for starting is that I have a young orchard, and as my neighbors have no bees, I need them for my fruit. I shall start with one full colony, and possibly a nucleus. In my locality the pasture begins with cherry, plum, pear and apple, whitewood, blackberries, clover, sumac, asters and golden-rod. I see no reason why colonies could not be profitably maintained. All kinds of cereals are largely raised, especially buckwheat.

B. F. ONDERDONK.

Mountain View, N. J.

Bees Doing Well—Wired Foundation.

Bees are doing well here, gathering pollen and honey and rearing brood. We have a good bee-country along the Canadian river, when we have rain. I have 8 colonies of Italians, and want to increase to 20 this year. Why doesn't some one say something about wired foundation in place of wiring brood-frames? I will try about 15 pounds this year of wired foundation, in Hoffman frames, with Grubb's improvement—that is, a wedge-shaped piece cut out of the underside of the top-bar, then put in foundation, and nail in the wedge with small brads. I think that will beat wiring frames. WM. PLYMELL.

Choctaw City, Okla. Ter., March 30.

Convention Notices.

MINNESOTA.—The regular semi-annual meeting of the Southern Minnesota Bee-Keepers' Association will be held on the first Monday in May, 1895, at LaCrescent, Minn. All bee-keepers invited. E. C. CORNWELL, Sec.

Winona, Minn.

ILLINOIS.—The spring meeting of the Northern Illinois Bee-Keepers' Association will be held at the residence of H. W. Lee, in Pecatonica, May 21, 1895. It will be held one week later if it is a stormy day.

New Milford, Ill. B. KENNEDY, Sec.

CONNECTICUT.—The fourth annual meeting of the Connecticut Bee-Keepers' Association will be held at the Capitol, at Hartford, Wednesday, May 8, 1895, commencing at 10:30 a.m. All interested are invited.

Waterbury, Conn. MRS. W. E. RILEY, Sec.

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C. B. BANKSTON, CHRIESMAN, Burlison Co., TEXAS.

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Honey & Beeswax Market Quotations.

CHICAGO, ILL., Mar. 18.—Demand is good for all grades of honey excepting dark comb. We quote: Fancy comb, 15c.; No. 1, 14c. Extracted, 5@6½c. J. A. L.

CHICAGO, ILL., Mar. 7.—During the past two weeks a good movement has been felt in the market. Sales have been in small lots, but quite frequent. We quote: White comb of the highest grade, 14c.; off in color, 13@13½c.; yellow, 10@11c; dark, 7@9c. Extracted, 5½@7c.—the higher price for white in 60-lb. cans.

Beeswax, 28@30c. R. A. B. & Co.

PHILADELPHIA, PA., Apr. 1. — Choice white clover honey is getting very scarce at 14c. Dark and poorly filled sections, 8@10c. Demand is falling off on extracted, prices ranging from 4½@7c. Strictly pure white clover very scarce at 10c. Beeswax arriving more freely and selling at 30@31c. W. A. S.

CINCINNATI, O., Apr. 8.—Demand is slow for all kinds of honey. We quote: Comb, 12@16c. for best white. Dark comb is unsalable. Extracted, 4@7c.

Beeswax is in good demand at 25@30c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, Mo., Apr. 8.—The supply of comb and extracted is fairly large, and the demand only fair. We quote: Comb, 1-lb., No. 1 white, 14@15c.; No. 2, 12@13c.; No. 1 amber, 12@13c.; No. 2, 10@11c. Extracted, 5@7c. Beeswax, 22@25c. C. C. C. & Co.

NEW YORK, N. Y., Feb. 20.—We are gradually working down our stock of comb honey, and the indications are that we will succeed in disposing of all of the white honey and possibly all of the dark during the spring, at following quotations: Fancy white, 1-lbs., 12c.; fair, 10c.; buckwheat, 8@9c. The market is well supplied with extracted honey. Demand is fair for choice grades, while common stock is neglected. We quote: White clover and basswood, 5½@6c.; buckwheat, 5@5½c.; Southern, 45@55c. per gallon, according to quality. Beeswax firm and in good demand at 30@31c. H. B. & S.

BUFFALO, N. Y., Mar. 16.—The honey market is getting quite well cleaned up here. We quote: Fancy, 13@14c.; choice, 11@12c.; buckwheat and commoner grades, 7@8c. Extracted is in very light demand here, and we would not advise shipments. B. & Co.

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REFERENCE—Metropolitan National Bank, Chicago.

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List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

J. A. LAMON, 43 South Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 28 & 30 West Broadway.
CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.

Kansas City, Mo.

C. C. CLEMONS & Co., 423 Walnut St.

Buffalo, N. Y.

BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

Philadelphia, Pa.

WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 p.; illustrated. 25c.

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We will guarantee to get **28 cts.** for all the Beeswax of light color or yellow, shipped to us for sale during the month of April, 1895.

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151 So. Jefferson St., CHICAGO SCALE CO., Chicago, Ill.
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Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

With Plenty of Stores in the Hive in Spring, Should a Colony be Fed?

Query 967.—Suppose a colony has plenty of stores in its hive, is it well to feed in spring? If so, how often and how much?—Ontario.

Mrs. J. N. Heater—I do not feed in such cases.

G. M. Doolittle—Under such conditions I never feed.

Wm. M. Barnum—No. In such case let them alone.

Dr. C. C. Miller—I don't know. Wait till I see what the others say.

P. H. Elwood—It doesn't pay us to feed under the above conditions.

W. G. Larrabee—I have never practiced feeding for stimulating alone.

Rev. M. Mahin—Only at such times as no honey is to be found in the fields.

Mrs. L. Harrison—No. Don't feed in the spring. Do spring feeding in the fall.

H. D. Cutting—It depends upon many conditions. If they have plenty of stores I do not feed.

R. L. Taylor—No, it does not pay for the trouble—only see that the stores are abundant "sure enough."

Prof. A. J. Cook—I don't think it pays. The least work usually pays best. See answer to Query 964.

Eugene Secor—No. They'll manage the building up part in the spring if they have sufficient stores.

J. A. Green—No. But by "plenty of stores" I do not mean just enough to last them until they can get more.

Jas. A. Stone—I would not feed a colony that had plenty of stores, for fear of filling enough to crowd the queen.

G. W. Demaree—When bees have plenty of stores in the spring, fix them up warm at the top of the brood-nest, and let them alone.

C. H. Dibbern—If early swarming is desired a little thin syrup fed regularly every evening is a great help. It also puts the bees in good condition for clover or basswood honey.

B. Taylor—Experience has led me to think so. If I fed at all I would commence when the bees begin to carry in pollen, and feed 3 or 4 ounces every day until near the white honey harvest.

J. E. Pond—In my opinion, no. It might be well to shave off a few cappings to start the honey running, and thus stimulate brood-rearing; but usually when there are ample stores, they had better be left alone.

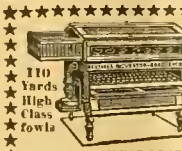
Dr. J. P. H. Brown—If they have *plenty* of stores to carry them till they can gather plentifully in the spring, I would not feed. If you want to stimulate them, uncap the honey in a couple of the outside frames.

Emerson T. Abbott—I should not do any feeding, but if too many of the combs were filled with honey, I should take some out of the center and put in empty ones, or sheets of foundation, and then cut the caps off a few of those left in the hive. When the honey was all removed from these, if there was not plenty of honey left in the hive, I would remove some of the empty ones and replace those first taken out. The idea is to let the queen have all the room she wants, and at the same time let the bees feel there is no danger of their getting short of stores.

E. France—No. If they have plenty of stores to carry them through until they can get honey outside they don't need feeding. You could feed them enough to spoil the colony by filling their brood-combs with stores.

Chas. Dadant & Son—No need of feeding a rich colony—better uncap a few of its honey-cells to induce the queen to breed, as it will be sure to do if the bees are at work even only on repairs, for in handling the honey they offer it to her oftener. Being better fed, she lays more.

Jennie Atchley—I never feed my bees when they have an abundance of honey—no use. If you wish to stimulate them, uncap some of their honey and hang in the center of the brood-nest, and you will likely find it to work well. You do not say you wish to stimulate, but I mention it anyway.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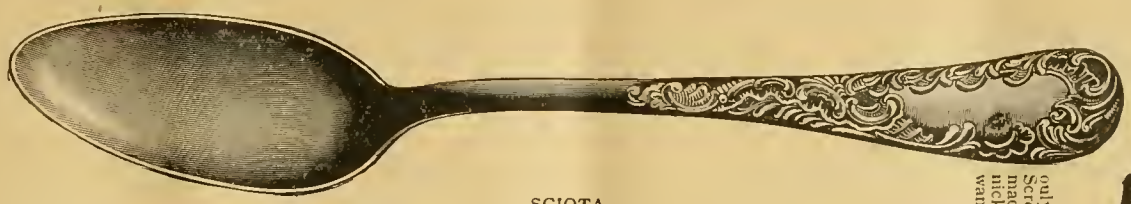

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Sciota.

No. 703.	Sciota Tea Spoons	per set of 6	$1.25
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" 707.	" Table Spoons	per set of 3	1.25
" 709.	" Medium Forks	per set of 6	2.50
" 711.	" Dessert Forks	per set of 6	2.50
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" 715.	" Butter Knife, Twist Handle	each	.50
" 717.	" Sugar-Shell (with Gold Bowl)	each	.50

No. 787.—This is the most compact Tool Set made and contains only tools that are useful. 6 Brad-awls, assorted sizes; 1 Chisel; 1 Screwdriver; 1 Tack Puller; 1 Scratch-awl; 1 Reamer; 1 Drill. All made with great care, of the finest tool steel, solid rosewood handle, nickel cap. No throwing tools out in the hand to find the one you want. Price, per set.....$1.25

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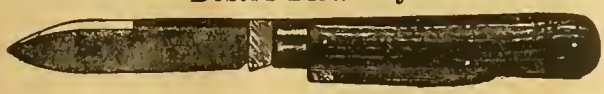

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No. 749.—Made for hard usage, each blade made of the finest steel, sharp as a razor, with steel rivets, rosewood handle, highly polished.

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½ SIZE.

No. 751.—For a farmer or mechanic we recommend this jack knife to be just what he will want and will give satisfaction. Every blade forged from bar steel and tempered in oil, will hold a keen edge. Steel lined with steel rivets, rosewood handle with name plate.

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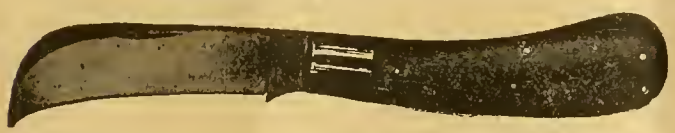

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No. 753.—Great care has been taken in getting out this Pruning knife and we take great pride in saying that no one has ever made one equal to it. The blade is hand forged from the best razor steel and shaped with great care, file tested and warranted. The handle is highly polished rosewood.

Price..... 75

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No Egg needed to settle. Keeps the pot clean inside. Never rusts or blackens. We guarantee our Economizer to make better, stronger and richer coffee, with 1-3 less. We allow each purchaser one week's trial Free, and if not satisfactory can be returned and we will refund the money.

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211 Wabash Ave., Chicago, Ill.

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CUT ½ SIZE.

No. 763.—This razor has no equal. It is made of the finest Silver Steel, Hand Forged, File Tested, Hollow Ground, highly polished, honed and stropped ready for use. Every one warranted to give satisfaction. Packed in strong case.

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No. 755.

Dobie's Texas Hunter

STEEL LINED.
HAND-FORGED.
BLADES MADE TO CUT.
STAG HORN HANDLE.

Price.....$1.25

CUT ½ SIZE.

Dobie's Good Luck Regulation Barber's Belt Strop.

THIS IS THE STROP FOR BARBER'S USE READY FOR USE.

24 INCHES LONG.

No. 765. This is the regulation strop used by all barbers. Two strops in one, and will sharpen a razor in seven strokes. This leather is the best that is made, and the linen or lower strop is made of the best Irish linen especially prepared. Razor never needs to be honed where this strop is used. This strop never needs to be oiled, and is warranted not to get hard or crack; can be rolled up and carried when traveling. "The Secret of Stropping a Razor with a Barber Strop" inclosed with each strop. Price 75c.

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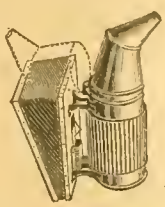

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35th Year. CHICAGO, ILL., APRIL 25, 1895. No. 17.

Contributed Articles.

On Important Apiarian Subjects.

No. 3.—Bits of Experience, and a Few Questions Suggested by Them.

BY T. I. DUGDALE.

(Continued from page 248.)

It has often been stated that in order to winter successfully, a colony of bees must have nearly all their winter supply of honey capped over. While this in the main may be true, I wish to mention a case which came under my observation. In the fall of 1893, while looking over my bees to ascertain their condition as to stores, etc., I came across one colony which had an ample honey supply to last during the winter, but none of it capped over, with the exception of a small part in two combs which would not exceed the size of an ordinary man's hand. I naturally concluded that they were "a goner" on those stores, as it was then about Oct. 1. I concluded, however, to let them alone and watch results.

They had their last flight about Dec. 11 that season, and did not have another chance to get out until during the following March. I supposed, of course, that they would be dead, but to my surprise they came through all right, and in as good condition as one could wish. I then opened the hive and found all the honey still uncapped that remained, but they seemed to have used an unusual amount during their confinement. Now, why did those bees leave that honey uncapped? and why did they winter as well as those having capped stores?

I have seen several unusual things in introducing queens, but will only mention one case I have in mind at this time. It occurred during the honey-flow while I had the sections on all the colonies, and most of them were working nicely on buckwheat, which was almost at its best, when I noticed one colony that did not seem to have their accustomed energy, so I concluded to ascertain the cause, if possible. On opening the hive, I found only a small portion of brood, and that all capped, and one cell from which a queen had evidently hatched, while there were traces of several others which had been torn down. The colony was very strong, and gave off that lonesome sort of a hum which often denoted queenlessness, and as I examined them closely I failed to find a queen; as they seemed to act as if they had none, I concluded that she must have been lost when she left the hive to mate. So I took one which I had on hand, and, after clipping one wing, put her in a candy cage and gave her to the colony. While passing the hive two days later, I found a dead queen on the alighting-board at the front of the hive. I examined her closely, and made up my mind that it was a virgin queen, and as her wings were whole, I did not open the hive for several days. I then found the queen I gave them, laying nicely, and the bees resumed work as before. Did these bees have that young queen in the hive all the time the other was in the cage? If so, why did they accept the laying queen when they had a virgin queen with them? And did the workers kill her? or did the laying queen do it when she got out of the cage? Has any one else succeeded in introducing a queen safely under like circumstances?

Having several times seen it stated as being advisable to destroy combs when they become very old and black, I will now proceed to give a case which came to my notice during

Alfalfa or Lucern—the Great Honey-Plant of the West.

Sketch made in California from a natural flower.

the season of 1893. I had some combs which had been transferred from box-hives, and were in use some 12 or 15 years after, and were very black, but otherwise in good condition. I had two of these combs in a colony which had swarmed, and I allowed them to rear a queen from a cell which I gave them.

At the time I thought the queen should be laying, I went to the hive and was about to open it when I noticed that the bottom-board at the entrance to the hive was covered with a lot of brownish dirt. My first thought was that the moth-worms had gotten a strong start inside, but upon getting the hive open, what was my surprise to find the colony in good condition, and on examining the two old, black combs, I found the cells completely torn down to the base, and side-walls started up to about the usual heighth of comb foundation. Each comb was torn down in this way in a circle where all the brood had hatched, and on finding the queen which had not yet begun business, I closed the hive and resolved to keep an eye on the colony to see what they intended to do with the old combs. Next day I again opened the hive, and found the side-walls raised to the length to ¼ of an inch or over, and the queen had then started laying in each of them. I kept watch of them daily for some time, and found that they tore down the whole of the cells on those two combs, but did not disturb any of the others, and had I not thus caught them in the act, I should not have known that anything of the kind had taken place, as the combs were still a very dark brown color.

I have seen a similar case in another colony, and, strange to say, under exactly the same circumstances, viz.: having cast a swarm and no laying queen present, and as fast as the brood hatched the comb was torn down to the base of the cells and rebuilt. In view of these facts, who is prepared to say that a set of combs may not be good for all time, if properly cared for?

I will now give a brief outline of management in the spring which I have used of late with success.

I may stand almost alone when I say that I, for one, want a flight-hole in the front of my hives above the bottom entrance, and as soon as the weather will permit I examine each colony, noting the amount of stores remaining; also see that they have a queen. Next comes the strength of the colony—if only bees enough to cover three or four frames, these are set in so that the flight-hole can be used as an entrance, and after giving at least one frame containing honey, the division-boards are set alongside with a passage-way under the bottom of them, and the remaining combs set on the outside. The bottom entrance is then entirely closed, thus excluding other bees from entering and robbing, while the colony in the hive can readily have access to their honey, and will proceed to uncap and carry it in, and thus stimulate the queen to lay; and it is really surprising to see how rapidly a colony will build up when prepared in this way. As the season advances, and more room is needed, all that is required is to pull back the division-board and set over as many frames as are needed, and continue in this way until the colony is again able to fill the hive.

I have always found it the safest plan to place the frames added to the colony at the outside of the cluster, and trust to the queen to spread the brood as she sees fit. Does she not know better about that than we? West Galway, N. Y.

The Large and Small Hive Discussion.

BY H. D. EDWARDS.

The discussion now going on in regard to the most profitable hive to use—a large or small one—while it is interesting, is calculated to befog the mind of the beginner. When such men as the Dadants, and others, take the ground that an 8-frame Langstroth hive is too small, and such men as Doolittle, Boardman, and others, say that it is large enough—all being men of large and varied experience and close observation—it is not to be wondered at that such practical apiarists as Dr. Miller take to the fence, and those of lesser experience, and beginners, "take to the woods." But, really, I think location, the length of the honey harvest, and the production of comb and extracted honey, should in a great measure determine the size of the hive.

Now, I am of the opinion that a hive the size of an 8-frame Langstroth, is large enough for the production of comb honey in most localities. We all know that a queen in the spring of the year will not lay eggs any faster than she has bees to take care of the brood. I believe it is stated by some one, that an 8-frame Langstroth hive will contain cells enough to allow the queen to lay 2,400 eggs daily. How many colonies have bees enough to take care of the brood from 2,400 eggs daily, even up to the time of the honey harvest? for we all know that bees reared at the close of the harvest, except to go through the winter with, are of no profit, but are, in fact, an expense.

Take, for instance, a locality where white clover is the principal source for surplus; where there is no basswood or other flowers to lengthen out the honey harvest—the white clover does not last usually longer than 30 or 40 days, oftener 30 than 40; then what surplus we get we must get during these 30 or 40 days, and we must devise some plan to get the bees in the sections at the beginning of the harvest, if we wish to secure the most comb honey. Then if we have a large brood-chamber, where there are plenty of empty cells, the bees will commence to store honey in these empty cells, and will refuse to go into the sections, and will fill all the empty cells with honey also, and the cells the young bees are hatching out of, thereby crowding out the queen. What we want, then, is a hive no larger than the queen can completely fill with brood by the time of the harvest, in order to crowd the bees into the sections. Then, accordingly, we want a hive rather below than above the capacity of the queen; and, in my experience, I have found but few queens that will occupy more than 8 frames up to the beginning of the harvest.

I think I see one advantage the large hive has, sometimes, over the smaller hive, and that is, there are frequently more bees in the large hive in the spring, consequently the queen will lay faster, because she has more bees to take care of the brood, and hence there will be more bees to gather the surplus when it comes. But, then, that depends a good deal upon the apiarist—how he manages his bees in the fall. That is the only advantage I see that the large hive has over the small one. When I say "small one," I mean a hive of the capacity of an 8-frame Langstroth. Hence the queen has more bees to take care of the brood, and she will lay faster, and the colony will be stronger at the beginning of the harvest. But, all things considered, I believe an 8-frame Langstroth is large enough to obtain the best results in the production of comb honey in most localities. Delhi, Ill.

Spring Management of Bees.

BY J. A. C. DOBSON.

In my discussion of this subject I have endeavored to confine myself as closely as possible to practical points, and to present what I know and do myself, and not what others know and do.

Bees must be properly managed in the spring, or the crop of honey will be disappointing in any season.

If the bees have been provided in the fall with plenty of stores to last them through the winter and until late in the spring, nothing need be done to them except to see that the entrance is kept open and the packing on top of the frames is kept dry by removing the covering and exposing it to the sun and air on warm sunny days, whenever they occur in winter, until spring has fully come. But if any doubts exist about any colony having an entire sufficiency of stores to last it through, such colony should be examined on the first warm day in February, and if a deficiency is found to exist it should be fed, either with honey, syrup or candy. This examination is the more important because it is a well known fact that colonies of the same size consume very different quantities of honey through the winter, and we are very liable to be mistaken in our estimate of the quantity of honey the bees may have on March 1.

If we do not have frames of honey to give, then I think it is altogether the safest at this season to feed them candy, but if several warm days come together I would prefer to feed syrup, for they would then have time to store it in the frames where they cluster, and could the more easily reach it if several cold days should come afterwards. But whatever is fed should be in quantity sufficient to last them until spring has fully come, because the rigors of last March (1894) are liable to come any year.

For fear of chilling the brood, the hive should never be opened unless the weather is warm enough for the bees to fly freely. It is, however, not necessary to expose the brood-nest to ascertain the quantity of honey a colony may have; simply turn up the quilt at the sides and feel the weight of a few of the frames.

SPRING DWINDLING.—I have heard and read much about spring dwindling, its cause and prevention, but I have never suffered from it like most bee-keepers have, and I am vain enough to attribute this fact to my management. I winter my bees on the summer stands, and know nothing practically about any other method, but from what I do know I am not

surprised that bees wintered in the cellar suffer greatly from spring dwindling, because we always have more or less cold and inclement weather after the bees must be taken from the cellar.

Early in the fall I securely protect my bees on top of the brood-frames and all sides of the hive except the front, and I do not remove the outside protection until it is reasonably certain the cold weather is past, and the colonies are strong in numbers, and not all of the top protection until I put on the sections. In this way the bees are not so much affected by sudden changes of the weather, and a warm hive is the best stimulant the queen can have.

By keeping my bees well supplied with food and water convenient, they do not leave the hive so much in quest of food on cold, wet or windy days, and become chilled and lost. The result of this course, with me, is that my colonies generally grow continually stronger from the time they first begin to fly out.

If the bees have suffered from diarrhea, the bottom-boards should be removed and thoroughly cleansed, dried and returned. If the combs in the side frames have become damp and moldy, they should be taken out and dried in the sun, or in a warm room, and returned. But if the top packing has been kept dry, and the hive tilted forward, there will never be any moldy comb.

Stimulative Feeding.—The general prosperity of a colony of bees in spring depends upon proper care, favorable weather, and plenty to eat—the latter condition being absolutely indispensable. The greater number of bee-keepers claim that to get the best results it is necessary to resort to daily feeding, whether the bees have plenty of stores or not, but I think the work of the queen depends upon the care and attention the workers give her, and it is certainly conclusive that the bees have natural sagacity enough to feed their mother well when they have plenty in store, whether fresh supplies are coming in or not. I have experimented some on this line, with the result that it is unnecessary to feed bees that already have plenty to eat in store.

When it is necessary to resort to stimulative feeding, we are advised by many of the experts not to begin too early, because we are liable to have our hives full of bees which we would have to feed too long before the honey-flow begins. My answer to this is, that I much prefer to have my colonies strong a month too soon than a month too late. My experience and observation upon this subject have lead me to the following conclusion, that a warm, dry, clean hive with an average queen, and full rations all through the spring season, means a strong colony by the time the honey-flow begins.

Consolidation of Colonies.—If a man has several colonies of bees in the spring and desires to secure honey rather than to increase the number, it will generally be found that some of them are too weak to produce much surplus, and should be consolidated; and it is a question whether the consolidation should take place early or late in the spring. My experience is that the conditions should be made just at the time the honey-flow begins, for then you will have had the advantage of the work of two queens for 30 or 40 days instead of one, and you will be able to determine which queen should be preserved; and if both queens are found to be doing well, you can save them both by placing one of them in a nucleus; and another advantage is, that you can consolidate at this time without fear of loss from fighting.

Putting on the Sections.—I try to take the start of the bees by putting on the sections early, at least a week or ten days before the white clover flow begins, and then both bees and queen will find that they have plenty of room, will not take the swarming fever, and will go into the sections earlier.

Robbing Among the Bees.—Although my hives set in rows less than two feet apart from center to center the whole year around, I have had but little trouble with robbers, and in every case where robbing has occurred it has been the result of my own imprudence. Outside feeding is dangerous and unprofitable, and it took only a little experience to teach me this fact.

Syrup should always be fed warm, and if given even to but one colony when the bees are flying and idle, it will excite the whole apiary, and start them to robbing. Feed only late in the evening, or upon days when the bees are not flying.

As soon in the spring as the bees begin to fly, the entrance of the stronger colonies should be contracted to an inch or two, and the weaker ones so that only a bee or two can enter at a time; and should robbing begin, the best way that I know of to stop it is to throw an armful of straw in front of the hive that is being robbed, and sprinkle it well with water.

Conclusions.—In his address to this association one year ago, our worthy President, Mr. R. S. Russell, referred to the wide-spread bee-mortality of the winter of 1892-93, and came to the conclusion that "no amount of conjuring and packing could ever solve the winter problem;" and another brother called it "bee-cholera." My neighborhood was no exception to this serious mortality, except in about four cases; two of them kept their bees in good, warm bee-houses; the third had chaff hives, and none of them suffered any serious loss; and I wintered 18 colonies on the summer stands protected as herein described, and all of them came through in fine condition. A neighbor of mine, but two miles away, had 14 colonies left to shift for themselves, and lost all with cholera (?). I had an opportunity to examine these hives after the bees were dead, and I found a nasty mess of wet and moldy dead bees on the bottom, and the whole interior of the hive in a damp, moldy condition, and honey enough in most of them to have lasted them through. My conclusion was irresistible, that the bees died from the ignorance, negligence and cruelty of their keeper, and that it is this trinity, and not cholera, that causes such wide-spread bee-mortality in unfavorable seasons. I do not deny that in some seasons the honey collected in the fall is unhealthy, but such seasons are extremely unusual in this country.

This experience and much more causes me to differ widely from both the sentiment and inference contained in the above reference, and while I do not believe in "conjuring," I do firmly believe that "packing" and rational management has already in a great measure "solved the winter problem," and will eventually furnish a complete solution; but it may be that when I get older I will know more.—*Read at the Indiana State Convention.* Brownsburg, Ind.

Bee-Keeping in Peidmont, Va.—5-Banded Bees.

BY W. O. ROUDABUSH.

Many people are laboring under the false impression that the Peidmont section of Virginia is minus the natural advantages to make it a profitable place for the bee-keeper. Now I would have all the readers of the American Bee Journal to dispel at once any ideas that may exist in their minds that such is the case, and follow me for a moment and see if I cannot give them a view of this section of the "Old Dominion" that will convince them that we have here nearly all the natural advantages the bee-keeper could wish.

The first, then, to be considered is pasturage. We have, with the single exception of basswood, all any one could wish for. The order in which they bloom are, fruit-bloom, maple, locust, poplar, clover, persimmon, sumac, gum, etc.

I wish to say something right here about our poplar (whitewood) honey. This honey is of a rich golden color, and in flavor, according to my taste, is inferior to none. The poplars with us furnish fully as much nectar as the white clover, so you see it stands with clover at the head of our honey-sources. We have only a short gap in the honey-flow here, and that can easily be filled with buckwheat and Alsike clover.

When the flow from fall flowers reaches us, it is then that the bees "makes things hum." It generally catches all the colonies crammed full of bees, and they always gather enough for winter stores, and pile up a handsome surplus. The flowers that furnish us fall pasturage are the golden-rods, asters, ironweed, etc. There are hundreds of others of which I don't know the names.

We have no trouble here with wintering. Plenty of stores is the key to successful wintering. No cellars or special repositories are needed—the summer stands is the only method employed, and is attended usually with success, if the bees are provided with plenty of sealed stores.

Bee-keeping here is in its infancy, so far as modern ideas and principles are concerned. We need more power to root up and overthrow the "old fogy" notions, and give room for more advanced ideas of the pursuit. Scientific principles have driven them from other fields, and they must drive them from ours.

With all of the advantages named, we have cheap homes and one of the healthiest climates on the face of the globe. I am a very poor writer, but hope I may be understood when I say to those thinking of coming into our midst—Come and share the blessings God has lavished upon us.

SOME 5-BANDED BEES.

I cannot think of closing without saying something about this race, or rather, strain of bees. I see a great deal about them in the bee-papers. I am only one of the little "fishes" compared with some of the brother bee-keepers, and I fear if I venture from my lurking-place I may prove a tempting bait

for some of the "larger" fry, and get "swallowed up." Be this as it may, I know a thing or two about *some* 5-banded bees. I consider their points of merit in the following order: Beauty, prolificness of queens, honey-gathering, hardiness, and gentility. I have never tried but one strain of these bees, and would say that the 3-banded, or ordinary strain of Italians, are their superior, unless it comes to the question of temper. Why, those 5-banded bees could organize and have a regular pitched battle before one could think of anything but run for his life, and leave the battlefield in possession of the enemy! I intend to get some more queens this season, but they will not be the 5-banded kind, unless it be under the guarantee that they will prove different from the ones I have tried. Nortonsville, Va.

Report of the Vermont Convention.

BY C. W. FISHER.

The 20th annual convention of the Vermont State Bee-Keepers' Association was held at Middlebury, Jan. 30 and 31, 1895. The convention was called to order by Pres. W. G. Larrabee. After prayer by R. H. Holmes, the President read a letter from Secretary H. W. Scott, saying that he would be unable to attend the convention on account of sickness at his home. C. W. Fisher was chosen Secretary *pro tem.* The minutes of the last meeting were read and approved. There were 25 members present at the roll call.

The Secretary reported that he had sent cards to the bee-keepers throughout the State for the purpose of obtaining statistics in regard to number of colonies, amount of honey secured, method of wintering, etc. As so few responded to the request, nothing definite could be obtained. The Treasurer's report was quite flattering.

REARING QUEENS IN UPPER STORIES.

A very interesting essay was given by A. E. Manum, on "How to rear queens in upper stories, and the best time to rear good ones." He chooses his stock colonies the year before, and uses the natural method of queen-cells. He often had difficulty in introducing virgin queens the same day that the second lot of cells were cut out, but by skipping one day he was almost sure of success, losing not over 3 per cent. If the virgin queens were a few days old he had to use much more care in their introduction. Sometimes the colony would build queen-cells after the queen had been removed eight days. He thought that he had one instance of a nucleus carrying eggs into the hive and starting queen-cells.

BEES MOVING EGGS.

J. E. Crane had a case of bees moving eggs from one comb to another. O. J. Lowery gave an instance of eggs being found and cells started when there was no possible source in the hive from which the eggs could come. Mr. Crane had had trouble in introducing virgin queens into mixed colonies; he could easier introduce older ones into black than Italian colonies.

CLEANSING WAX AND MAKING FOUNDATION.

"How to cleanse wax and make foundation"—R. H. Holmes. "Put nothing in, take everything out," was his rule. He melts the wax in a steamer, not allowing it to boil: in a second can, it is kept warm and allowed to settle, then it is strained through cheese-cloth into the dripping-can. He uses the Given press. Mr. Crane thinks the wax is better if water is in the dripping-can.

W. G. Larrabee had used a solar wax-extractor with very good success. E. H. Sturtevant uses the Doolittle method. He could make, with very little labor, fine wax ready for use, from old combs.

Reports of the members for the season of 1894 showed that the crop of honey throughout the State was rather light. Some localities reported a good yield, but it was overbalanced by the shortage in other places.

The question-box was next opened.

SPRAYING FRUIT TREES—BEES FOR WINTERING.

"What can the association do to prevent injury to bees from spraying of fruit trees?" J. E. Crane recommended the distribution among the farmers of a pamphlet by A. I. Root upon the subject of spraying. Educate the farmers as to the best time to spray.

"Would a colony of bees be worth as much the following spring if, when the supers of honey were taken off, the bees were destroyed instead of letting them return to the hive again?" R. H. Holmes thought it would be detrimental to them. He wants both young and old bees for wintering. H. B. Isham wants August to September bees to winter. Mr. Crane wintered a colony successfully that were queenless after the middle of July.

HOUSE-APIARIES—EXPERIMENT STATION WORK.

"What I think of house-apiaries, and how to work with one"—H. H. Burge. I have a house holding 52 colonies, the lumber of which cost about $50. I have used it one year. There was not much difference from the chaff hives in the production of honey last season, but the work could be carried on much easier because everything was more convenient and accessible. One is not as apt to be stung. Fall feeding was much easier than when the colonies were out-of-doors.

"What has been done at the experiment station?"—C. W. Fisher. During the winter the temperature of the bee-room in the house-apiary varied considerably. Records were made which showed that at times the mercury changes 30° to 35° in the course of five hours. The hives were well packed in chaff or sawdust, with cushions of the same on top, and a dead air space below. The temperatures in the brood-nests also changed; sometimes there was a variation of 15° in the same period of time. The bees wintered very well, not seeming to be affected by the changes. The spring was so very early there was no chance to do experimental work in spring feeding. The colonies averaged heavier, in the spring, wintered in the house than in chaff hives outside. The honey-yield was much above that of the State in general, notwithstanding the experimental work.

Mr. D. D. Howe, Farm Superintendent, first said that the Board of Control of the Station commended the work done the past year, and they requested that experiments be prescribed for another year. Director J. L. Hills requested that a report be prepared for the yearly bulletin. Mr. Howe then gave results of the experiment with the Langdon non-swarmers. Four colonies were run with the non-swarmers through the swarming season. There was no swarming. The colonies were much weakened during the time because the queens nearly stopped laying. Two of them were destroyed by the bees before the non-swarmers were removed. The directions as to changes, etc., were closely followed. However, a good many capped queen-cells were cut out. The first capped cells that were destroyed by the bees was July 6, after the non-swarmers had been on a month. The yield of honey from either set was not as much as from single colonies equally heavy at the commencement of the honey-flow.

O. J. Lowrey read the experiments that were accepted by the Board of control to be tried during the past year. A row of evergreens was set around the yard for a wind-break. One of these experiments, which was carried on under Mr. Lowrey's supervision, was for the purpose of determining whether the bees added to or chemically changed sugar syrup when transferring it to the cells. Empty combs were given colonies in the fall, and sugar syrup was fed. One colony was fed three pounds, another 20 pounds per day. After feeding it was extracted, and samples taken which were chemically analyzed.

The samples taken were numbered 2, 3, 4 and 5. Nos. 2 and 3 were from the colony fed 20 pounds, and Nos. 4 and 5 from the one fed three pounds per day. If these honeys were sold in open market, sampled and analyzed, Nos. 2 and 3 would be condemned as adulterated with cane-sugar without question, and Nos. 4 and 5 almost without question.

A very interesting letter was read from V. V. Blackmer, who has moved to San Mateo, Fla., and purchased an interest in the apiary of A. F. Brown.

The committee on nomination of officers of the association for the ensuing year gave their report, which was accepted and the nominees elected as follows:

President, H. W. Scott, of Barre. Vice-Presidents—Addison Co., Miss M. A. Douglass, of Shoreham; Chittenden Co., D. D. Howe, of Burlington; Franklin Co., F. M. Wright, of East Enosburgh; Lamoille Co., J. W. Smith, of Moscow; Orange Co., M. F. Cram, of West Brookfield; Rutland Co., V. N. Forbes, of West Haven. Secretary, C. W. Fisher, of Burlington. Treasurer, H. L. Leonard, of Brandon.

The committee on resolutions submitted their report, which was unanimously adopted as follows:

Resolved, That we express our thanks to the proprietor of the Addison House for favors shown at this meeting; also to the C. V. railroad for reduction in rates.

Resolved, That we express our thanks to the Board of Control of the Vermont Experiment Station for the very able manner in which they have conducted the experiments relative to the apiary connected with the station.

WHEREAS, An all-wise Providence has removed from this

association E. J. Smith, an able member and one of our vice-presidents, be it

Resolved, That we tender our heartfelt sympathy to the family and friends of the deceased in this our loss and their sad bereavement.

The committee to confer with the Board of Control at the Experiment Station in regard to experimental work to be done there the coming season, consisting of O. J. Lowrey, H. W. Scott, and M. F. Cram, was re-elected.

BEE-PARALYSIS—GRADING COMB HONEY.

"In view of the rapid strides of the disease known as bee-paralysis, is it safe to buy queens of any one and every one who sees fit to advertise them for sale?"

J. E. Crane—"I have had cases which seemed similar to bee-paralysis that were probably due to some form of poisoning." Others reported similar cases. It was the opinion of Mr. Crane that what we have had in Vermont is not true bee-paralysis.

How shall we grade our comb honey?

R. H. Holmes—"We have to grade according to the requirements of the market to which the honey is sent." He thinks that the general call is for but two grades.

H. M. Everest—If a cell of pollen is in the section put a drop of alcohol on it to prevent moths from developing.

MANAGING OUT-APIARIES.

"How to manage out-apiaries"—J. E. Crane. If running for extracted honey the matter is very simple. Strengthen the colonies as much as possible in the spring, then take out the honey. For comb honey, know that the queens are clipped, put the sections on early, and cut out all queen-cells. In eight days if cells are found, remove the queen; in another eight days cut out cells again, and introduce virgin queens. Do not remove the queens unless the colony is preparing to swarm.

THE QUESTION-BOX.

"Which is best for wintering, sugar syrup or honey?"

J. E. Crane—I have no hesitation in saying sugar syrup.

"Which queens are best for Vermont bee-keepers, those reared in the northern or southern part of the United States?"

R. H. Holmes—Get the very best queens possible, and from our own climate.

"Will a wooden feeder keep as sweet as a metal one?"

V. N. Forbes—Never use metal. Waxed wooden feeders are best.

"What is the best way to keep combs from the bee-moths?"

H. B. Isham—Place tarred paper on the floor and between every brood-nest.

G. W. Fassett hangs them on a rack with a space between the combs.

"When can we most successfully feed for wintering?"

M. F. Cram prefers to feed quick, when honey and pollen are scarce, late in the fall.

"Does a bee inherit its working qualities from the queen or drone?" From both.

The attendance was good, and much interest was shown throughout all the sessions. It was voted to hold the next annual meeting in Burlington. The convention then adjourned. C. W. FISHER, *Sec.*

Burlington, Vt.

How to Get the Most White Comb Honey.

BY W. H. PUTNAM.

I wish to touch briefly upon how to secure the greatest amount of white honey. We hear so many bee-keepers say every year that they did not get any white honey, or very little white honey. The plan generally pursued by the ordinary bee-keeper is to let the bees alone in the spring until they begin to swarm; then he hives the new swarm, and, after about two weeks, he puts on his surplus cases. A little knowledge of honey-producing plants, and their time of blossoming, would change all this; for, be it understood once for all, bees do not make honey—they simply gather it, and store it in the hive.

In my locality the first surplus honey comes from white clover, in May and June, followed by a short spell of no honey at all, and then comes the basswood the last of June and first of July. Basswood bloom is all over from July 10 to the 15th, and then comes another famine. In order to get white honey in my locality, the bee-keeper must have his bees in condition to gather honey by the middle of May. He must put on his surplus-cases as soon as his bees begin to build brace-combs. It is my practice to tier up as fast as possible, and sometimes I have two or three surplus-cases nearly filled at swarming time.

As soon as a new swarm issues I remove the old hive a little to one side, placing it at right angles to the old stand. I place the new hive exactly where the old one stood; place the partly-filled section-cases on the new hive; and in less than ten minutes after swarming, the cases are again filled with workers; each worker carries a sacful of honey with her when the swarm issues, and thirty or forty thousand bees can hold a considerable amount of honey. I have weighed new swarms that weigh 18 to 20 pounds without the hive—in fact, before they had been put into the hive at all. I have no doubt that two-thirds of this weight was the honey in the bees.

With me, bees swarm during white honey-flow; and by following the method here described, no time is lost; they go right on, and more cases may be added. Meantime the old hive is moved nearer and nearer the new hive, day by day, until they stand side by side and very close.

On the seventh day after swarming, in the middle of the day when the most workers are in the field, quietly and carefully pick up the old hive; carry it quietly, and put it down softly at the greatest distance possible in the same yard, from its former position. Notice the effect. Almost instantly you will see a swarm, as it were, collecting around the place where this hive had stood; they are the workers returning from the field; their home is gone; they are confused, and fly aimlessly about for a few seconds; they alight at the entrance of the new hive; their mother is the queen there reigning; the bees have the same scent; they are received, deposit their load, and go again to the field for more honey. Likewise the workers that were in the old hive which we moved so carefully do not know their home has a new location; they go forth, but return to the old location; they are received, and a rousing colony is the result. No wonder the honey-sections fill up quickly, as there are so many workers.

But what happens at the old hive in its new location? Nearly all its working force has been drained away to the new swarm. In a day or two the new queen hatches. She has few bees to hamper her actions; she makes a tour of the hive, and murders her sleeping sister-queens, yet unborn. She is monarch of all she surveys, and there is none her right to dispute. You will not be troubled with second swarms. No time has been lost since white honey began to flow, and now we have the whole working force concentrated on comparatively few sections. If there is any white honey, we get it. After a week or two we can put sections on the old hive, and all our bees will be in shape for the dark or fall honey.—*Read at the Wisconsin State Convention.* River Falls, Wis.

The Sunny Southland.

CONDUCTED BY

MRS. JENNIE ATCHLEY, BEEVILLE, TEX.

A Northerner's Trip to the South.

BY C. THEILMANN.

(Continued from page 250.)

Mr. Hanna had a fine garden with many subtropical plants and trees, among them were fine specimens of the banana trees, with their smooth stems 5 or 6 inches in diameter, and 6 to 7 feet high, and leaves 5 to 6 feet long and nearly 2 feet wide. The fruit-stem starts out of the top center of the leaves (it is the continuous inside of them), and makes a bow of a half-circle downwards, and hangs in this position while the fruit-pods grow perpendicularly upwards. Mr. Hanna told me that every tree drinks as much water daily as an ox.

He is well fixed for irrrigating his garden, has a good house and cistern, but no cellar. Mrs. Hanna was going to show me her cellar, which consisted of a store box under the house. The houses are all set on 3 to 4 feet high posts. I have not learned why it is done. I found them built so everywhere in Texas. I doubt whether there is a cellar in Texas. It is claimed that fresh potatoes would rot just as quick in a cellar as in the ground. They will keep good only a short time anywhere after ripe.

About 9 a.m. Dec. 27, we started for the Midwinter Bee-Keepers' Convention, 2½ miles away at Mrs. Atchley's,

where we found a considerable crowd of bee-keepers and non-bee-keepers, and some who wanted to learn bee-keeping. The Atchley family was very busily engaged in attending to their many guests, while myself and my companion looked around among the many bee-hives (empty and otherwise) which were in the two yards, about 30 rods apart. We also looked into a pile of supers that were stored on the ground. Mr. Atchley said moths were more plenty here than elsewhere. Some of the supers were all alive with moth-worms of all sizes and ages, and many cases full of combs were totally destroyed by them. I guess Willie forgot them. We opened a number of hives with and without bees in them, and then tried to count the colonies, but we gave it up.

My host took me home for dinner, as a cold, freezing "norther" sprung up and made it too cold for the provided picnic under the live-oak trees, in spite of the green beans and other garden vegetables on the tables. After dinner the meeting was called to order in the shop, and proceeded as the readers have already seen in the American Bee Journal.

On Dec. 29 Mr. Hanna's garden was badly demoralized with the heavy frost, nearly everything being more or less frozen, and the toil and careful tendings for weeks and months vanished in two nights. I felt sorry for the nice banana trees. On this morning Mr. Hanna took me out into the country about 12 miles southwest, to show me the country and a farm which was for sale. On our way we saw an orange tree with ripe fruit, from which Mr. Hanna got two oranges for me to take home, which I did. We ate them here, and they were of very fine taste and flavor. This tree did not seem to be hurt much.

Further on we came to something new to us up here—it was a Mexican gate. It works automatically, is about 18 feet wide, with a stationary post in the center of the road and gate. The post is about 10 feet high, with a chain attached to the upper end, and connected with the gate about 4 or 5 feet on each side of the center. The chain is adjusted in a winding-around-the-post position, so the gate hangs free, suspended on the post, and its weight keeps it closed, and effects a pressure to the posts on each side of the gate ends. In opening the gate the chain winds around the post more tightly, and if let go it will close itself. Trained saddle horses will push them open, which saves the rider getting off.

From Beeville to Skidmore (14 miles) there are seven of these gates in the heavily traveled public road. The gates are allowed to save fencing to stockmen. There is a heavy fine for tying and leaving them open.

Nearly all the land as yet is used for pasture there. The country is dotted over with live-oak and other timber, of which mesquite is the most numerous, and which is said to be the best honey-bearing tree in Texas, also the most widespread. Some places the honey-bearing shrubberies are very thick on the ground, and from all appearance it is a good bee-country. Some of the trees and shrubs, it is said, come into bloom after a spell of dry weather, every time it rains, but it seems that some of the dry spells *won't let up.*

The soil is a black, sandy loam. There are big, prickly pear cactus all over, some being 4 inches at the root, and 3 and 4 feet high. I took some of their thorns home in the skin and flesh of my legs—could not get them out. I also saw wild grapevines one foot in diameter. I was told that they bear well, and are as large and as good as the Concord, and make excellent wine. They thrive well all over the land. A man near Gainesville made 32 barrels of wine last fall, and it is good. I never drank better American wine even in California. It is God's gift, where water is so bad.

One of the oldest stockmen at Beeville told me that there wasn't much in cattle any more. When he first came there (38 years ago) he could count on 4 acres per head, now it takes 6 and 7 acres, and he has to feed besides. Land at that time was very cheap compared with present prices—$5 to $10 now. Some farmers in central Texas told me that they have to feed their stock, as a rule, for four months in winter, and sell 3-year-old steers for from $6 to $8, and 4-year-olds from $7 to $10. They lose many by death.

Mr. Hanna is reliable, accommodating, and knows the country well. He is a surveyor and land agent, and will give any desired information about the country.

Before I left Beeville I made another call at Mrs. Atchley's, when they had time to show me their queen-rearing stock. The Carniolans—of which Mr. Lockhart is so proud—were surely full-bloods. The 5-banders that Mr. Atchley showed me were all yellow except the black tip on the end of the abdomen.

I did not hear any very big "blowing" in the South until Willie Atchley broke the ranks, when he put too much stress on the speed of his pony—in taking me and a lady from Houston to the train, 2½ miles, on partly sandy road, in five minutes. To this he was encouraged the evening before, when we met him on the road with two ladies in the buggy; he turned, and we followed as fast as our horse could go, but in spite of all the urging, the whip was hurt more than the horse. Willie was almost out of sight, and Mr. Hanna had to buy a new whip when we got to Beeville; but Willie got paid for it that morning, although he got us to the train in time.

My unwilling stop was at Karnes City—I missed my train at Kenedy Junction. At this place (40 miles from San Antonio) I inquired for bees, and was told that the Bohemian hotel-keeper had some bees. I went there to see them. The lady was at home, and I asked her if they kept any bees. "No, we keep no bees!" "What's that out in the yard?" I said. "I could see the bees flying through the window. "We have a few bees," she then said. "Do they do well here" I asked. "We get some honey," she replied. "Can I go out and see them?" "No, you can see them through the window," was the reply. (Superstitions.)

Karnes City is rather a dry place, with bad water. I found an artesian well here, 1,800 feet deep, but the water is too salty for the house or stock. San Antonio has a number of artesian wells, it is said, with good water.

On my way home the flowers and blossoms had all disappeared, from the effects of the hard freeze, but many cotton-fields were still awaiting harvesting. Many bales had already shelled, and were falling to the ground. Cotton is the principal crop of Texas, and the only real staple article for which there is a cash market any time it comes to market. Cotton is just in its element in Texas, and that State produces more of it than any other in the Union. I have not seen or heard of any warehouses or elevators for other crops. I think every one has to seek his own market for them.

There is more good farming land in Texas than I had expected to see, though there is enough poor land, too; but the many extremes in the weather is a big obstacle, besides the millions of torturing and damaging insects is enough to make it uncomfortable. Some places fruit trees grow thrifty, but the "northers" often come untimely, and spoil the crop. Minnesota has a better show to ever be a fruit State than has Texas.

My train took me through Dallas, one of the largest, if not the largest, city in Texas. It is a lively town, with considerable manufacturing establishments, and a good country around it. I also came through Greenville, the home of Mr. Graham, the comb honey bee-keeper. Some of the readers will remember seeing him at the World's Fair convention. This is also the former home of the Atchleys. I kind of wondered to myself why they left such a nice and prosperous town as Greenville, surrounded with a fine farming country, and the nicest oak and other timber I have seen in Texas, even if there was a little snow on the ground when I came through. You see it isn't quite so dry in the northeast part as it is further south and southwest.

When I came to Denison, near the line of Indian Territory, there was 5 or 6 inches of snow, and still snowing. The southeastern part of Indian Territory is well timbered, while further north the endless prairies are as yet sparingly settled. There is good land with large cornfields and fruit orchards along the eastern part of Kansas. Kansas City, Mo., is one of the largest railroad centers in the southwest. From here I came through St. Joe, the home of Mr. Abbott. It is a fine city now from what it was in 1855, when I came through the first time up to Sioux City. The Missouri valley is one of the most productive valleys that can be found for corn, stock and fruit. The cornfields extend for miles, and big crops of corn are raised there. I also saw orchards of several hundred acres in one piece.

Council Bluffs is another large place on my route, and so is Sioux City. Le Mars and Ireton, Iowa, where I have some old neighbors living, were my last stops. This is a very fine farming country, with fine houses and barns, with nice planted groves around them. Corn, oats and swine and other stock are raised here. From $40 to $50 is the price of land per acre.

I arrived home on Jan. 6, after a journey of about 3,400 miles. I feel more contented than heretofore, with our Minnesota soil and climate, after seeing what I did. But those people who are dissatisfied may go to Texas.

Theilmanton, Minn.

Only One Cent a Copy for copies of the American Bee Journal before Jan. 1, 1895. We have them running back for about 10 years. But you must let us select them, as we cannot furnish them in regular order, and probably not any particular copies. Just send us as many one-cent stamps as you may want old copies, and we will mail them to you.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

About the Top-Bars of Brood-Frames.

1. Is there any advantage in having the top-bars of brood-frames wider than one inch? If so, what?

2. Does the width of top-bars have anything to do with brace and burr combs?

3. Is there any other advantage in having the top-bar made thick, than to prevent sagging? If so, what?

J. W. P.

ANSWERS.—1. Yes. See next answer.

2. Yes. If there is a space of ¼ inch between top-bars, bees are not likely to build between. If the space is more, they put in brace-combs; if less, propolis. So if the frames are spaced 1⅜ from center to center, the top-bars must be 1⅛ inches wide to make the space between ¼.

3. Yes. With a thick top-bar the bees are less likely to run up brace and burr combs. They will also build whiter combs over black brood-frames. If the sections are too close to the brood-frames the bees will carry little bits of black wax from the brood-combs to the sections.

Transferring—Management at Swarming-Time.

1. I wish to transfer bees from some old frame hives of a different size from the dovetail hives, into the latter—without cutting the combs out. Will this plan work well?—Place a new hive under the old, with a honey-board between, after having first found the queen on a comb of brood and placing comb and queen in the lower hive. Then fill up the lower hive with combs and honey from some colonies that have died during the previous winter. If I can do this safely about the middle of April or a little before, the bees would be all hatched out by apple-bloom, which occurs about the first of May.

2. I notice you indorse Mr. Dugdale's method at swarming time. He places the old hive on top of the new swarm for 4 or 5 days. Now the Frank Coverdale method is the same in principle, only he runs the newly-hatched bees into the swarm for some 14 days. Now would you think it entirely practical to take the remaiuing young bees and brood at the end of 14 days and make a nucleus of them, and how would you do it? I think the Coverdale plan a good one, especially so if there would be enough bees and brood left at the end of 14 days for what increase that is desired. "OUT WEST."

ANSWERS.—I think your plan will work all right at the right time, but I'm afraid you'll lose by it if you try it as early as you propose. True, if your bees are strong enough to swarm before fruit-bloom, then it would be all right, but your locality, bees, or something else must be quite exceptional if you have swarming before fruit-bloom. Before that time bees are building up, and dividing the forces as much as would happen by putting the queen in a story below the brood, with an excluder between, would be somewhat disastrous in most places. I think you would find that the majority of the bees would stay with the brood in the upper story, and so few would stay with the queen that she would diminish her laying. The long and short of it is, that the plan is all right when colonies are strong enough, but practiced before that time it will simply retard the building up. In most localities the time for operation would only be after fruit-bloom, or with very strong colonies during fruit-bloom.

2. Yes, you could make a nucleus of the young bees left at the end of 14 days, and all you will need to do is to give them a queen-cell or a queen. They can be allowed to stay where they are, or they can be moved to a new stand, for these young bees will stay wherever they are put. But you might gain a good deal of time by letting the bees rear their own queen from one of the cells left in the old hive. Have a piece of excluder-zinc to prevent the young queen going out through the escape, or rather from going into the escape, and at the end of the 14 days take away the escape and give the regular entrance. You may count upon it that only one young queen is left without your cutting out queen-cells.

But you can accomplish exactly the same thing with a modification of the Dugdale plan, and although it may be no better, yet I know more about it from having practiced it years ago. Leave only enough bees on the brood above to take care of it, shaking off the rest into the new hive, and the bees will not swarm again even if you leave all queen-cells. Then 14 days after swarming move the old hive to a new location and you are just about where you would be if you had followed the Coverdale plan. For when you move the hive to a new location all the bees that have been out flying will leave the new location, go back, and join the main hive. So in either plan you will have left only the young bees that have not flown before the 14 days. I think you may have by the last plan a little honey stored above in the old hive that by the Coverdale plan might have gone into sections, but it will not be lost, and you may gain something in the way of brood, for the bees may take a little better care of the youngest brood where they are free to go and come.

Separators in Three Pieces.

Has any one tried wood separators in three pieces, leaving a bee-space between the pieces? Will they work? You see if they work all right, I can rip my own stuff for separators. My sections are 4⅝x4⅝. I. O.

ANSWER.—I don't remember that I ever heard of separators being made in three pieces, but I think it is B. Taylor who make them in two pieces and likes them much. And he's good authority, too. I don't see why three pieces couldn't be used as well as two. I think he fastens the two parts together by little cleats running up and down.

What to Do With a Colony in a Box.

I captured a stray swarm of bees last June, in a box 18x14x18, and they are in good condition now in the same box. What would be the best thing to do with them for this season—would you advise to transfer them into a proper hive, or leave them the way they are? I would like to get a swarm from them this summer, as I intend to get as many as I can and find out what there is in the bee-business in my neighborhood. J. K. E.

Aspinwall, Pa.

ANSWER.—I suspect you'll do best to leave them where they are till they swarm, especially as you want to get a swarm. But you may do well to limit their room somewhat, for you're giving them a pretty big contract to fill a box 18x14x18. You will be more sure of a swarm if you cut down the contents of their box to about 2,000 cubic inches. There are two ways in which this may be done. One way is to saw off the bottom of the box or hive. The other way is to fill up as much as you would saw off. The way to do this is to make a box closed on all six sides as deep as the depth you want taken from the hive, and the other two dimensions an inch less each way than the inside dimensions of the hive. Then lift the hive and set it down over this box.

When a swarm issues, hive it in a movable-comb hive, set this on the old stand, putting the old hive close beside it, and in five or six days move the old hive to a new place altogether. Then in three weeks from the time of swarming you can transfer the mother colony into a frame hive or not, as best suits you.

I half believe if I were in your place I'd not transfer, but let the bees stay, after swarming, in the old box-hive. They'll probably winter there better than in a frame hive, and give you a rousing swarm each season from which you'll get a good lot of honey. In case the season is good after swarming-time, it's possible the old colony may give you some surplus. Bore a big hole in the top of the hive, or better still, about four 1-inch holes, set a box over this for surplus, glass in one side if you like, and a larger box to cover over the surplus box to protect from the weather. Never mind if you bore right into the honey. Won't hurt a bit.

If you're anxious for more increase, put the swarm in a new place, and let the old hive stand, and it will likely throw out a second swarm. But in that case you run the risk of having it so weak it won't get through the winter.

Look here. If you "want to find out what there is in the bee-business," first thing you do, get one of those "A B C's" this journal is now offering at such favorable rates (see page 254). Sorry that's advertising, but I'm not going to withhold good advice on that account.

That New Song—"Queenie Jeanette"—which is being sung everywhere, we can send you for 40 cents, postpaid, or club it with the American Bee Journal for one year—both for only $1.10. Or, send us one new subscriber for a year (with $1.00), and we will mail you a copy of the song free.

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GEORGE W. YORK,
EDITOR.
Assisted by the following Department Editors:

DR. C. C. MILLER - - - "QUESTIONS AND ANSWERS."
MRS. JENNIE ATCHLEY - - - "THE SUNNY SOUTHLAND."
"GLEANER" - - - - "AMONG THE BEE-PAPERS."
"BEE-MASTER" - - - - - "CANADIAN BEEDOM."
DR. F. L. PEIRO - - - - - "DOCTOR'S HINTS."
REV. EMERSON T. ABBOTT - - "NOTES AND COMMENTS."

Vol. XXXV. CHICAGO, ILL., APR. 25, 1895. No. 17.

Editorial Budget.

A New Remedy is reported to have been concocted by a certain joking Dr. Gaul, and that it "cured some bees that had the hives!" That pill doctor's name should have been "Gall"—for he must have lots of that in his make-up. Of course it was all intended in fun.

The Wisconsin Convention, held at Madison, Feb. 5 and 6, 1895, elected the following officers for the ensuing year:

President, Franklin Wilcox, of Mauston; Recording Secretary, H. Lathrop, of Browntown; and Corresponding Secretary and Treasurer, N. E. France, of Platteville.

Notes and Fragments seem to comprise the greater part of the April Progressive Bee-Keeper. There are "Star Apiary Notes," "Wayside Fragments," "Rose Hill Notes," "Notes in General," and "Nebraska Notes." But no notes were noted due at sight or in 30 days. The Progressive is "up and coming," to quote an apt expression used by a friend a short time ago.

The Bee-Keepers' Union might have a new feature added to it—that of making collections for its members. In his Illustrated Home Journal for April, General Manager Newman had this paragraph:

THE UNION DID IT.—Mr. C. Klock, of Pearsall, Tex., had a claim against a commissiou merchant for honey shipped three years ago. Being a member of the Unioa, he requested the General Manager to collect it. It was done, and in 15 days Mr. K. had his money.

Prof. Cook, writing from Claremont, near Los Angeles, Calif., April 12, said: "Bees are doing splendidly. This is *the bee-country.*"

Mr. W. A. Pryal, who lives at North Temescal, near San Francisco, Calif., wrote thus April 8:

"This is going to be a big year for bees hereabouts. We have had over 30 inches of rain—much above the average. Already some of my hives are ready to extract. I think the crop will be the biggest I ever had. My oldest brother is taking the apiary in band, and he has everything in good shape for the coming harvest. I have not heard much from the southern portion of the State, but I should snppose that they will have a good crop down there."

Good for California! After the failure of last year, a good honey season now will be appreciated out there. Everybody should get ready for the honey-flow in good time, and not miss a crop by being unprepared if it should be on hand to be harvested.

The Illinois Appropriation for the benefit of the State Bee-Keepers' Association has not been granted. The following from Secretary Stone explains the matter:

DEAR BRO. YORK:—Our hopes of getting our appropriation bill through the House are blighted. Last Thursday (April 11) the appropriation committee reported it back to the House, recommending that it do not pass. I would think it all right, considering the condition of the State treasury, for them to cut off all appropriations possible, if it were not for the fact that those engaged in the different agricultural pursuits of the State pay the largest share of the taxes, viz.: those immediately engaged in agriculture, those in horticulture, dairying, bee-keeping, etc. And yet, when it comes to making an appropriation for any of these, they fight it to the bitter end.

The dairymen fared the same as the bee-keepers, and the horticulturists are not sure of anything much better. Their bill has been twice favorably reported back to the House, and then recommitted each time for the purpose of defeating it, or cutting it in two.

These "public servants".(?) of ours who pretend to work for the interests of the "dear people," think nothing of voting an appropriation to build a monument for some dead man, or of adjourning to go home and spend five days (from Friday morning to Wednesday morning) at a cost to the State of over a thousand dollars a day; but when it comes to voting to help some agricultural interest, to spread its information for the good of the general public, I for one fail to see where they represent us.

The three bills spoken of above, are all Senate bills. Ours passed the Senate without any trouble, where two years ago it met its defeat. At that time one of the Senators had promised his aid, and then because the party line was drawn, went back on his promise. The same Senator we invited this year to "stay at home," though he spent much money to get back again. We are in favor of inviting some of the House appropriation committee to stay at home next year. We will not name them publicly, though we have many bee-keepers in their districts.

JAS. A. STONE, *Sec.*

So far as I can see, the only way for agricultural and other deserving people to get their rights is to hereafter send only such persons to make the laws as will care more for the interests of their constituents and less for personal interest and ease. Thousands of dollars are often voted for needless things, yet when a few hundred are really deserving and necessary, it is withheld. I, for one, am willing to give the women a chance to try their hand at doing justice, and let the men stay at home until they are fully rested and informed about the needs of the best part of our popnlation—those who live and work on farms.

The "Giant" Bees advertised awhile ago in the Bee Journal have proven to be a "giant" mistake. The young man who took "Holt" of them has let go. He promises to return any money that may be sent him on account of his advertising. It was also a mistake on the part of the Bee Journal to announce them without first making a thorough investigation. This acknowledgement is due the readers of this journal, as its publishers do not mean to admit any questionable advertisements in its columns. More care will be exercised in the future.

The April Review was received "on time," which showed that Editor Hutchinson had been doing some pretty hard work the past few months, as last fall his paper was nearly one month behind time. He has been suffering from an attack of la grippe this spring, which made it harder to get caught up. It is a great pleasure in this office to receive the other bee-papers promptly, as well as to mail the Bee Journal so its readers will get it on time.

Soft Candy for Bees in England.—In a private letter I received from Mr. Thos. Wm. Cowan, editor of the British Bee Journal, he wrote thus in reference to Mr. Abbott's criticism on page 190, about feeding soft candy to bees instead of hard:

Mr. Abbott objects to our using soft candy, but we make our candy just so that there is no mess whatever, and it does not run among the bees. Our soft candy is very different to what you in America call soft candy, but there is no question with us as to which is the best, and no one here who has used our soft candy in spring will ever take to the hard. T. W. COWAN.

The Ontario Foul Brood Controversy.—Since publishing Mr. McEvoy's reply (page 237) to Mr. Clarke's criticism (page 174) of his (McEvoy's) report on foul brood, I have received a letter from Mr. Clarke in which he says very plainly that there is due him an apology from Mr. McEvoy and from me. To the

latter part, I of course agree, and would most humbly apologize for publishing Mr. Clarke's criticism of Mr. McEvoy's report, which criticism necessitated publishing the reply by Mr. McEvoy. Now, by apologizing for publishing both the criticism and the reply, Mr. Clarke and Mr. McEvoy can each take his share of my apology, which will leave matters about where they were at the time Mr. McEvoy's foul brood report was printed.

Wishing to get the exact nature and limits of the power invested in the Foul Brood Inspector of Ontario, by Act of Parliament, some correspondence has passed between Mr. Clarke and the Ontario Government. The Attorney General was first addressed under the idea that he was the authoritative exponent of statutory law. He, however, referred the matter to the Department of Agriculture for reply, which Mr. Clarke has forwarded to me. It reads as follows:

TORONTO, April 4, 1895.

Rev. W. F. Clarke, Guelph, Ont.—

Dear Sir:—After reading the presentation of the case by yourself, and also by Mr. McEvoy, I find it is practically impossible to reconcile the statements, and all that appears possible for me to do is to answer one question further in regard to the powers of the Inspector.

In the case af the Agriculture and Arts Act, the interpretation of doubtful points is left in the hands of the Minister of Agriculture, but no such power is given to him or to this Department in the case of the Foul Brood Act. In this matter, therefore, any doubt or uncertainty will have to be settled by reference to a court of law. If you ask, however, merely for the opinion of this Department in regard to his powers, I can simply refer you to Sec. 3 of the Act, a copy of which was sent you, and this Department reads that section as follows:

1. The Inspector is directed by the President of the Association to inspect the apiary.
2. The Inspector goes and inspects the apiary, and satisfies himself of the existence of foul brood in its virulent or malignant type.
3. The Inspector orders the destruction of the infected hives, under his own personal direction.

It does not appear to this Department that the latter clause requires the Inspector to await the return of the owner, to go and find him, or even to send him written notice, but that if the owner or his servant is not present to carry out the instructions of the inspector, he is authorized to set the match with his own hands. As I stated before, the Inspector claims that the hives were badly infected, and that there was nothing to be done but to burn them; and you claim that they were but slightly affected, and that no burning was necessary. Neither the Attorney General's Department nor this Department can, of course, decide as to this latter question, and I presume it would have to be settled in a court of law. But I do not suppose you will determine to carry your dispute that far.

You will understand, however, that this is merely the opinion of this Department as to what the Act means, and is not or cannot be considered as anything more than a mere opinion.

Yours very truly, C. C. JAMES,
Deputy Minister of Agriculture.

So that all the readers of the American Bee Journal may know the full text of the Section of the Foul Brood Act epitomized by Mr. James, I give it as sent me by Mr. W. J. Brown, of Chard, Ont.:

REVISED STATUTES OF ONTARIO, 1890.

CHAPTER 66, SECTION 3.—The said inspector shall, whenever so directed by the President of the Ontario Bee-Keepers' Association, visit without unnecessary delay any locality in the Province of Ontario and there examine any apiary or apiaries to which the said President may direct him, and ascertain whether or not the disease known as "foul brood" exists in such apiary or apiaries; and whenever the said Inspector shall be satisfied of the existence of foul brood in its virulent or malignant type, it shall be the duty of the Inspector to order all colonies so affected, together with the hives occupied by them, and the contents of such hives and all tainted appurtenance that cannot be disinfected, to be *immediately destroyed by fire* under the personal direction and superintendence of the said Inspector; and after inspecting infected hives or fixtures, or handling diseased bees, the Inspector shall, before leaving the premises, or proceeding to any other apiary, thoroughly disinfect his own person and clothing, and shall see that any assistant or assistants with him have also thoroughly disinfected their persons and clothing; provided that where the Inspector, who shall be the *sole judge thereof*, shall be satisfied that the disease exists, but only in milder types and in its incipient stages, and is being, or may be treated successfully, and the Inspector has reason to believe that it may be *entirely cured*, then the Inspector may, in his *discretion*, omit to destroy or order the destruction of the colonies and hives in which the disease exists.

In the editorial foot-note on page 238, it was not intended to utterly prohibit further discussion of the subjects of foul brood or foul brood laws in these columns, but simply to stop any further reference to the special Clarke-McEvoy case, as it was quite apparent that anything more on that line would mainly consist of uninteresting personalities.

Among the Bee-Papers

Conducted by "GLEANER."

IMPROVED BEES.

For the last three years, B. Taylor has been buying golden and five-banded bees liberally, as he reports in Review. He has had so many cases of their dying in winter that he begins to doubt their vitality and endurance. For the past two years he finds his bees unusually cross, and in most cases the aggressors are the very yellow bees, so he thinks it is a case of "improved strain of bees."

COMB VS. EXTRACTED HONEY.

One reason, according to R. C. Aikin in Review, that bees store more honey in extracting-combs than in sections is that they work more readily at filling combs already built, but he thinks the total gain is not so great as it appears, for part of the honey that is put in the extracting-combs would be put in the brood-combs if sections were on. He also thinks that the increased crop of extracted is at the expense of largely increased labor.

DEAD AIR SPACE.

Hutchinson challenges a statement in Gleanings to the effect that no chaff or packing material is needed if the compartment is air-tight. He says the air, being alternately warmed and cooled, will set up a circulation, and thus act as a conductor, while the packing breaks up this circulation.

LARGE OR SMALL HIVES.

The Dadants in Gleanings having made the point that the number of bees will be lessened by restricting the queen to a small hive, the Bee-Keepers' Review makes reply that although there are fewer bees per queen, there are no less per comb or per apiary, the idea being that with smaller hives more of them can be kept. The Dadants will probably flaunt in his face the fact that restricting the queen in the small hive makes a great increase of swarming over the three or four per cent. they have with their big hives.

BEST FORM FOR A HIVE.

H. R. Boardman, in Gleanings, takes the old straw skep as the model of perfection in a bee-hive, if only the requirements of the bees are considered. As coming nearest to this form, and yet suited to man's convenience, he favors the square hive with square frames, 12¾x12¾ inches. That gives the bees a chance to keep their stores above them, as in the straw skep.

TEST FOR ADULTERATED WAX.

Here's a test that Gleanings says is not entirely reliable, but sufficiently so to put the buyer on his guard. Take a two-quart Mason jar, put in some pieces of wax of known purity, and fill up the jar half full of water. The wax will float. Now gradually add alcohol till the wax will just sink to the bottom. The sample to be tested will sink when put in, if pure, but will float if part paraffine or ceresin.

ELECTROPOISE AND OXYDONOR.

A. I. Root has been after that fraud, electropoise, with a sharp stick, and now he's after oxydonor, a near relative of electropoise. In the oxydonor circular reference is made to D. L. Moody. In reply to an inquiry, Mr. Root received the following: "I know nothing about this, and never endorsed it.—D. L. Moody."

SACALINE.

This new Russian forage-plant, mentioned lately by Chas. Dadant in this journal, is being boomed at a good rate. A. I. Root quotes without endorsing the circular statement that it is perfectly hardy, even in Siberia; once planted grows forever without cultivation or manuring; endures severest drouths, luxuriates in wet lands, etc. But Director Wilson of the Iowa Experiment Station says cattle won't eat it, even in Russia.

THE HEDDON HIVE PATENT.

A description of the patented Danzenbaker hive appeared lately in Gleanings. James Heddon appears in a letter in Gleanings, claiming that this hive is a direct infringement on his rights, but thinks it unnecessary to spend large sums of money in United States courts, providing the people are properly informed regarding the rights and wrongs of inventors, and he thinks it rests with our literature to give them such

information. Mr. Danzenbaker's attorney makes reply that Mr. Heddon applied for a patent on the divisible brood-chamber but was refused, and seems to think that the only thing Mr. Heddon can claim is the thumb-screws and cleats to hold the frames together.

THOSE GIANT BEES OF INDIA.

A card in Gleanings from C. D. Holt, the man that advertised the big bees, says, "I was led into the Giant-Bee business through my ignorance, and am out $14 cash....and am very much ashamed of having been mixed up in this matter."

Canadian Beedom.

Conducted by "BEE-MASTER."

A Late Season.

We are having a late season here in Canadian beedom. It is now the 15th of April, and on this parallel of 43° north latitude, the bees are still in winter quarters. I do not know a single cellar-winterer who has begun to put out his hives yet. My own are still packed as they have been since the beginning of November. Usually there are fine, bright days in midwinter, when the bees can take a flight, but during the past, one might almost say the present winter, there has been no let up. We had no January thaw, and, until one day last week, there was no weather warm enough to tempt the bees out for a flight. Such a winter of steady, persistent cold is not remembered by that noted personage, "the oldest inhabitant."

It does not follow from all this that we are not to have a good honey season. When bees are properly housed and duly protected they usually do well after a steady, hard winter. It is the uncared-for and neglected colonies that are thinned down and die of cold and starvation. The probabilities are that when spring weather does come it will do so to "stay." Brood-rearing will go on without any check. Colonies will build up rapidly, so that when the honey-harvest begins there will be plenty of workers to gather it in.

The winter has been a favorable one for the protection of clover and other forage plants. There has been no alternately freezing and thawing weather. The fall wheat has come out in good condition. I do not know whether fruit-buds have been injured by the severity of the frost or not. It would not be surprising if it were so, for there have been some pretty low dips of the thermometer. But the main sources of our honey crop have been well blanketed under the snow all winter, and will probably give a good account of themselves as soon as they are "up and dressed."

It would not be surprising if we were to have one of the old-fashioned, rousing honey seasons. There has been a succession of poor seasons, and the old proverb says it is a long lane that has no turn. The lane is already long, quite long enough most of us think, but there is One who knows better than we do how to regulate the seasons, and all other things in this mundane sphere. As Robert Browning sings:

"God is in heaven,
All's right in His world."

Bees from the South.

Some of our bee-keepers are trying an experiment in the way of importing bees from the South, as compared with wintering them over through our long, dreary winter. I know of a shipment of 10 4-frame nuclei which is being made from Florida to put this matter to the test. The question is, will it pay to make an importation of this sort every spring instead of keeping bees all the year round and risking the winter losses? The nuclei, including queens, are to cost $2.50 each. What the express will be from Florida is as yet "an unknown quantity." An advertisement in Gleanings, headed, "I told you so," quotes a one-frame nucleus as having in the course of a single season given 120 well-filled one-pound sections. This appears like a somewhat "fishy" bee-story. It dates from Heber, Utah. Well, if that can be done in Heber, Utah, or anywhere else on the North American continent, I want to emigrate there, start an apiary, and import one-frame nuclei every spring. I don't think a one-frame nucleus with two or three dozen workers and a little patch of brood, can achieve such a feat as that even in "the Sunny South." If the 10 4-frame nuclei will average 120 well-filled one-pound sections, it will pay us to import them at a cost of $5 each, including express charges.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Bee-Keeping a Specialty. — "Essays advising that bee-keeping as a business be made a specialty by the persons engaged therein have been written from time to time. The essayists are often eloquent in their advice, but never, I believe, practice what they preach." — W. G. Hewes, in Gleanings.

It has been a theory of mine for some time that there is more poetry and sentiment in bee-keeping as a business, separate and alone, than there is hard cash. I have also been inclined to think that there are few, if any, in the United States, who are making their entire living out of honey-production. If there is a single man, woman or child in the country with no other source of income, let him, her or it come to the front and explain how it is done. I know how it's done by many who claim to be specialists. One runs a newspaper; another has a farm; another has an orchard; another raises poultry; another has a government job; another pulls teeth, puts gold in them, and all such; another does literary work; another preaches; another tries to cure the ills of life by pills, extracts, etc.; two or three publish bee-papers and try to show the other fellows how to make big money by being specialists; a large number are, legitimately I think, making or selling supplies to those who, according to the theories of some, should be specialists;—but I am not hunting for these. I want to find the real, unadulterated specialist who can say with Paul, "This one thing I do, forgetting those things which are behind, I press toward the mark for the prize of the high calling." Honey-production, if honestly followed, is a "high calling;" but who is laboring for this "prize" alone to the exclusion of all others to gain a living for himself or herself? Hold up your hand.

Moths and Butterflies.—This comment is not about bees, but it will be none the less interesting to those who have learned to heed the suggestion in the following lines by Mrs. Whitney:

"Oh, look thou largely with lenient eyes.
On what so beside thee creeps and clings,
For the possible glory that underlies
The passing phase of the meanest things."

He who has developed the faculty of seeing the glory which lies hidden in nature all about him has taken the first step in a liberal education. Whatever awakens the power of observation in a child and leads it to ask the why of nature, and to see the beauty and glory which lie all about it, cannot fail to be of the greatest possible advantage to it in after life. I have been led into this strain of thought by reading an interesting and practical book on "Moths and Butterflies," by Julia P. Ballard, published by G. P. Putnam's Sons, of New York. Those who are interested in bees cannot fail to be benefited by reading about anything in the insect world.

The author of this book has the faculty of finding things of beauty and interest all about her in the everyday walks of life, and what is of more importance to the reader, she possesses the ability to make others see what she sees. Her talks about insects read like a fairy tale, and I know of no better book for a father to place in the hands of his children. It will give them many hours of pleasure and develop a closeness of observation and keenness of insight which will prove of great value to them all along the journey of life. If more of this class of literature were found in every home, I think it would prove a real attraction and draw many a boy away from the saloon, and keep many a girl from drifting into bad company. A child who learns in early life to take a lively interest in the insect world about it is not apt in after years to find time dragging heavily on his hands, or to go very far astray from the path of rectitude. Buy a copy of "Moths and Butterflies" for your children. It will be a dollar and a half well spent.

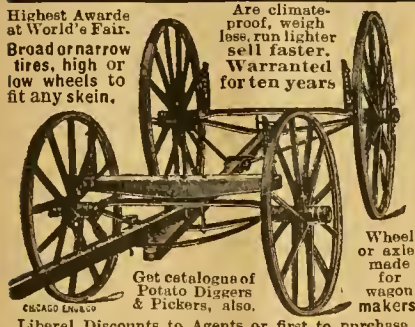
Foundation Mills.—An Iowa subscriber says: "Please ask those who have second-hand Pelham foundation mills, or other makes, to advertise in the American Bee Journal."

McCALLUM STEEL WHEEL WAGONS

Highest Awarde at World's Fair.

Broad or narrow tires, high or low wheels to fit any skein.

Are climate-proof, weigh less, run lighter sell faster. Warranted for ten years



Wheels or axles made for wagon makers.

Get catalogue of Potato Diggers & Pickers, also.

Liberal Discounts to Agents or first to purchase.
McCallum Steel Wheel Wagon Co., Aurora, Ill., U. S. A.

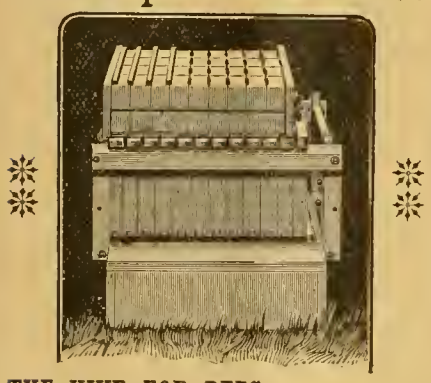
14A13t Please mention the Bee Journal.

300 Colonies of A No. 1 Italian

Bees in 8-fr. Dovetailed Hives, for sale CHEAP. Also a Full Line of Apiarian Goods, **all new**, at living prices. Send for Catalogue. to—
E. T. Flanagan, Box 783, **Belleville, Ills.**
11A10 *Mention the American Bee Journal.*

CORN —**BIG GOLDEN YELLOW.** Made 80 bus. in 1894. By mail, postpaid, 1 oz., 5c.; 1 lb., 25c. By express or freight f. o. b.—1 pk., 40c.; ½ bu., 75c.; 1 bu., $1.25; 2 bus., $2. Sacks free.
14A4 **J. R. Smith, State Line, Ind.**

The Aspinwall Hive!!



THE HIVE FOR BEES—
—THE HIVE FOR BEE-KEEPERS

Send for Illustrated Circular.

Aspinwall Manufacturing Co.,
13A6 **JACKSON, MICH.**
Mention the American Bee Journal.

Italian BEES & QUEENS

Ready in May. Queens, $1.00. Bees by the Pound, $1.00. Two-frame Nuclei, with Queen $2 50. One-frame, $2.00. Also, **Barred P. R. Eggs**, for setting, $1.00 per 15.

Mrs. A. A. SIMPSON, Box 48, Swarts, Pa.
15A13t Please mention the Bee Journal.

16 Years
Best on Earth

Sent per mail on receipt of price.

Circulars and Doz. rates sent on application.

Doctor, 3½ in., Largest Smoker made...	$1.75
Conqueror, 3-inch stove.....	1.50
Large, 2½-inch stove.....	1.00
Plain Standard, 2-inch stove	.70
Little Wonder, 1¾-inch stove.....	.50
Bingham & Hetherington Honey-Knife.	.80

T. F. BINGHAM, Abronia, Mich.
12A *Mention the American Bee Journal.*

General Items.

Lining Hives with Asbestos.

On page 87 this question is asked, "Why not line hives with asbestos?" In the winter of 1889-90 I lined seven hives with asbestos, and have had them in use ever since March 24, 1890, and can see no advantage whatever; and the disadvantage is that it partially prevents the rays of the sun from penetrating the hive, consequently the bees build up less rapidly in the spring. My bees are all wintered in the cellar. Possibly there might be an advantage in outdoor wintering, but it must be borne in mind that one experiment, even conducted over a series of five years, does not decide it absolutely. O. B. BARROWS.
Marshalltown, Iowa.

All in Good Condition.

I have 20 colonies of bees, all in good condition. W. C. ROSE.
Valley Falls, Kans., April 8.

Working on the Maples.

The top of the ground is as dry as fresh ashes for a few inches, then frost very deep. We need rain very much. Soft maples are in bloom, and the bees are working on them to-day. E. C. WHEELER.
Marshalltown, Iowa, March 27.

A Boy's Report on Bees.

I am a boy 16 years old, and have 10 colonies of bees. They are in good condition. It has been a hard winter here for bees, though it is warm now. I have kept bees two years, and I like the business very well. I should like to hear from the rest of the boys. I like the Bee Journal very well.
JAMES E. MORGAN.
Dansville, Mich., March 24.

Fine Weather—Wintered All Right.

We have fine weather at present. Clover is in good condition. Bees are working on maple blossoms now. Next comes swamp willow, which blooms about April 1, lasts one week, and yields an abundance of honey and pollen. Then comes the wild flowers of all kinds. Along about the first of May we have fruit-bloom. Bees wintered all right in this vicinity.
Rickel, Ill., March 27. J. F. WIRTH.

Trimming Sugar Maples for Bees.

Last week we trimmed off a lot of twigs sprouting from the trunk of a sugar maple in our lawn, and were very much surprised, a few days later, to find that dozens of bees were constantly around the oozing sap, gathering honey. Here is a hint for bee-keepers. This is by far the earliest honey the bees can get, and it may pay to thus supply the industrious and busy insects.
GEO. F. EVANS.
Martinsburg, W. Va., March 23.

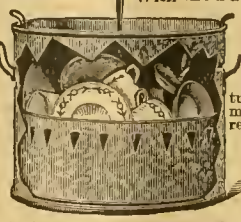
Bees Prefer Old Comb.

Dr. Miller, in Gleanings of March 15, in speaking of the query, "Do bees prefer new or old comb?" says: "Here is a nut for the experiment stations." The Doctor may be right in the main, but as to a few of us, we have "been there" and cracked the nut for ourselves. By repeated observations I have found that bees certainly prefer old to new comb. I run my bees mostly for extracted honey, and in placing the combs in the extracting supers, I alternate the old and new, and the bees invariably clean up and fill the old first. In scant flows, I have had them fill and cap the old, thus alternated, and not store any in the new. The queen also prefers the old

GOOD CHEAP SIMPLE

Wash Dishes

With the Faultless Quaker.



No breaking, no chipping; no scalded fingers, no soiled hands, no dirty clothes, no muss. You turn the crank, the machine does the rest.

SAVES DISHES, TIME, HANDS, MONEY, PATIENCE.

Sells at sight. Agents, both men and women wanted. We can give you a profitable business, easy work, good pay. You will be doing womankind good and make happy wives and daughters by introducing the Faultless Quaker. Write now for agency terms

THE QUAKER NOVELTY CO.
SALEM, OHIO.

16A4 *Mention the American Bee Journal.*

—SOUTHERN—
Home of the Honey-Bee

Where you can buy **Queens**, as good as the best—Warranted Purely Mated, and guaranteed free from Paralysis. From either an Imported or a Straight 5-B. or Golden Mother—75 cents each; 12 for $7.50. Tested, $1.00 each; 12 for $9.00. After June 1st, 50 cents each; 12 for $4.00; Tested, 75 cents each, 12, $7.50.

Good Breeders, $2.00 each; Straight 5-B. or "Faultless" Queens, $2.50 each. **Bees**, 75c. per lb. Circular Free. Address,

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WM. A. SELSER, WYNCOTE, PA.

to the new, but her choice is not so marked as is the choice of the bees.

I have reasoned that this choice of combs, especially by the bees, is instinctive. Bees winter best in old combs, and they seem to know this and store in them in preference to the new. H. F. COLEMAN.

Sneedville, Tenn.

Suffered from the Cold.

Bees in our county (Huron) have suffered heavily from the continued cold.

Hay, Ont., March 26. JOHN CARRICK.

Wintered Very Well.

Bees have wintered very well. I lost 3 colonies out of 61. As I write the bees sound as if it was summer. They are working on chop—wheat and oats—that I feed them. I do not think it does them much good, but it keeps them busy and out of mischief, which goes a good ways this time of the year. They are not so apt to rob. I scarcely ever have them rob each other. We have had a very cold winter. It has been cold since the last of December, 1894.

MRS. A. A. SIMPSON.

Swarts, Pa., March 30.

Worst Winter Ever Known.

There is plenty of snow here at present. It was nearly zero weather several mornings the past ten days. The pleasant weather last fall was somewhat favorable for wintering bees, but the winter has been the worst ever known. Probably it will be the most disastrous through the northern part of the United States known before in several years. Clover, etc., has wintered well. This will offset the bad winter, as less bees with plenty of forage is far better than many in a starving condition.

Reniff, N. Y., Mar. 25. J. H. ANDRE.

A Steady Honey-Flow in 1894.

White clover for honey was a failure here last season, but with the blooming of basswood until frost there was a steady and uninterrupted flow. The market is now well supplied. Indeed, there is more honey in sight in commission houses than there was in October. It is almost without exception attractive, and well crated, showing that bee-keepers are up with the times. January was a very trying month on bees out-of-doors, and there has been considerable loss, but it is too early to report the season's loss yet. We are not out of the woods. JOHN MORGAN.

Minneapolis, Minn., March 27.

Bees in Continental Europe.

After a prolonged stay in Sunny Southland, among the kind and friendly people of Kentucky and Virginia, we (Mrs. R. and I) left Staunton, Va., Feb. 21 for New York, where we embarked for Europe March 2. The voyage across the Atlantic Ocean in the French mail steamer "La Champagne" was uneventful, the company pleasant, and the accommodations excellent. We landed safely at Havre, and after a short stay prepared for a tour through France.

The whole country we passed through is beautifully level and fertile, almost like a garden. In all the villages we saw on the way, bees are kept, and without exception in straw skeps, which are set up in open sheds. In districts where the honey-flow is short, but plentiful while it lasts, bees are generally not kept the whole year, as they would eat up the profits during the many idle months. They are bought by the pound in the early part of the season from parts more favorable to breeding and maintaining, and sulphurated when the honey-flow ceases. The income obtained from the sale of honey and wax is quite considerable, and but little skill, outlay and labor is required.

In France, Italy, Spain and other Catholic countries there is a great demand for pure wax candles for ritual purposes, and the production of wax receives its attention from the peasant bee-keepers, as well as the production of honey, especially as comb-building can go on during the more idle weeks preceding the honey-flow. And, after all, brimstoning, if so carried out as to cause sudden and painless death, is not quite so bad as exposing the bees to death by starvation or cold. However, I am against the sulphur pit, and many more ancient and modern apiarian, political, social and religious institutions, but believe in putting the poor things, like wounded Chinese soldiers, out of misery when they can be put to no further use.

An alternate system in vogue with some of the more intellignt bee-keepers is to confine the queen on a piece of comb in a cage so constructed as to allow working bees admittance to her. This is done at the commencement of the honey-flow, and stops all increase for which at this stage no further usefulness exists; the bees engage their now most valuable time solely in gathering the sweet nectar instead of rearing brood, and the few bees remaining after the honey is taken can easily be united to some other colonies set apart for wintering.

A. S. ROSENROLL.

Aigle, Switzerland, March 23.

Wintered Better than Ever.

I have been waiting to see how the bees wintered before writing, so that I could tell the way I did it. As usual, I put the straw mats and cushions on top, but instead of leaving the main body of the hive on the bottom-board I raised it up and slipped under a super which was fixed in the following way:

I took ten boards the length of the super and ⅞ inch thick, the depth of the super, and placed them equal distances apart, or as nearly under the frames themselves as I could. I did this because I thought it would keep the heat in better, and also keep it darker in the hive, and my bees have wintered better than they ever did before, although it has been one of the worst winters we have had. Besides this, they are encased by a glass-top shed, and are packed in leaves.

The season is very backward here, the early flowers being a month behind that of last season. The bees were bringing in the first pollen yesterday. The prospects for a good honey-flow this season are fine.

W. C. BRIGGS.

Newton, Mass., April 8.

North Carolina Honey-Resources, Etc.

I have had some inquiries about the honey-resources of this part of North Carolina.

Our bees are first stimulated to action by the bloom of the alders, from which they gather pollen the last of February or first of March. Next comes the bloom of the maples, from which our bees gather honey. I believe that the maple secretes a large amount of honey, but they bloom so early, while the days are so short and cool, that the bees cannot work much of the time. As a rule, our bees always get a good start from maple-bloom.

Next comes the peach and apple bloom, the last of March and first of April; also the plum and cherry. These all produce honey, but we seldom get any surplus from them. Next, about May 10, comes the huckleberry and poplar bloom. The poplar is one of the best honey-producing trees that we have in this part of the country. About this time white clover begins to bloom. About May 20 the persimmon begins to bloom, and is a good honey-yielder.

About June 20 sourwood begins to bloom and lasts for several weeks—at times a good honey-yielder, at others not so good. About this time cotton begins to bloom, and lasts until frost yielding more or less honey all the time, but not enough at any time to get a surplus. Next comes the golden-rod, about Sept. 1, then about Sept. 20 the wonderful aster, which is a good honey-yielder,

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and lasts until frost kills it out. I believe that the aster is the best honey-producing plant in this country. If the aster bloom came in June and July, it would push the basswood for the prize medal.

I have had quite a time with the new bee-disease—bee-paralysis—the past summer. I tried sulphur, salt, etc., but no good. I lost every colony that had it but one. I believe that the disease is very catching. I have decided to burn or kill out all colonies at the first appearance of the disease.

Another thing I firmly believe, that this disease comes through the 5-banded or very yellow bees more than either the 3-banded or German bees. If not only queen-breeders, but all who have bees on a large or small scale, would agree to burn or destroy all colonies in which this disease makes its appearance, I believe that we would get rid of the trouble in a short while. If there is a bee-keeper who has had the German or black bees attacked by the above-named disease, please let us know it through the the American Bee Journal.

Some of my bees are sleeping under the snow. February has so far been a rough month. Snow has fallen upon snow, and we are certainly having winter in the South this time. JOHN D. A. FISHER.

Woodside, N. C., Feb. 16.

The Washington State Association.

The Washington State Bee-Keepers' Association has been organized with headquarters at North Yakima, at which place is situated the permanent State Fair grounds. In addition to the State association of apiarists, we also have the Yakima County Bee-Keepers' Association which meets every two weeks. Much good results from the periodical talks, and great interest has been created by the discussions. It has been decided that all supplies shall be ordered by one person, thus getting the benefit of uniformity, jobbers prices, and reduced freights.

The associations are pledged to educate the people of the State up to the necessity for planting white, sweet, and Alsike clover, basswood, soft maple and box-elder trees, and to the destruction of balm, cottonwood, Lombardy poplar, and in fact of all varieties of poplars, for the reason that these trees are the home of the green aphis which is so destructive to fruit-trees.

It is now conceded that the business of the bee-keeper and fruit-grower must go hand in hand, in order that the greatest degree of success may be attained.

L. R. FREEMAN.

North Yakima, Wash., April 1.

Comb Foundation—Do Bees Hear?

I don't think it would pay to keep bees here for the production of honey, as it is too dry and windy. I am engaged at present selling honey, trying to help some of our honey-producers dispose of their crop. I see an item occasionally in the Bee Journal that tempts me to put in a word, though I usually let it pass; but I have just read Mr. J. C. Wallenmeyer's "Score a big one for comb foundation," on page 209. Admitting that his test is fairly stated, the showing is decidedly in favor of the use of full sheets of foundation, but would it have made so favorable a showing under all circumstances? The circumstances under which his test was made was the most favorable to give a good showing in favor of the use of foundation—a heavy honey-flow. Now suppose the honey-flow had been scant, just sufficient to keep up brood-rearing and comb-building slowly for three or four weeks, would the showing have been so decided in favor of the use of foundation? my experience says no, although I am in favor of the use of foundation under favorable circumstances.

Regarding the question, "Do bees hear?" there is one thing that I don't remember any of the answerers mentioned, that would seem to indicate that bees hear. It is the peeping of young queens; we have frequently heard the first hatched queen answered

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vigorously by young queens that had not yet emerged from the cell. Once more: In hiving swarms, as is sometimes practiced, a small bunch of bees are shaken into the hive, or at the entrance: as soon as they set up the hum, how quickly the rest will head in that direction. Does not all this prove something? L. G. PURVIS.

Oklahoma City, Okla. Ter., April 1.

Winter in Alabama—After-Swarms.

We have had the hardest winter here known for years. The mercury dropped 3 degrees below zero. My bees did not have a flight for two weeks. I kept them shut up. I stopped the entrances tight with cloth, but in the warmest part of every day I would draw the cloths to allow the moisture to run out, then close again. My bees came out better than I ever had them do since I have been keeping bees. They are bringing in pollen and honey from maples, and have been for ten days. Fruit is later to bloom than I ever knew it to be in this country—not a bloom to be seen on a fruit-tree yet.

Why do some queen-breeders say they will send you a warranted purely-mated queen, and then she proves to be nothing but an untested one? I would think if she were purely mated she would be a tested one, or at least a tested queen is one that was purely mated, or her bees would have been hybrid. Will some one tell?

Some say it is useless to try to hive after-swarms by themselves unless you give them full sheets of foundation, or a hive that already has the combs. In 1893 I had a colony to cast a first swarm and two after-swarms. One of the after-swarms left, but I hived the other in a 1½-story hive with foundation starters, and in 1894 it was the strongest colony I had. It was boiling over with bees, and filled its hive full of honey. It is the heaviest colony I have now, and strongest in bees. In 1894 I hived an after-swarm that did not have more than a quart of bees, in a one-story hive, with foundation starters, and I did not feed them any. They came through the winter, and work now stronger than any of my black bees. Those after-swarms were hybrids. I think it will pay to hive any swarm that comes out if increase is wanted.

M. W. GARDNER.

Bankston, Ala., March 12.

A Woman's Experience with Bees.

When I had conquered the primaries of bee-keeping—such as getting straight brood-combs, even white section honey, big colonies ready for the honey-flow, reduction of drone-brood, checking the tendency to destruction by over-swarming, and so on, I prided myself on being a bee-keeper. When I proudly exhibited a ton and a quarter of honey one fall, the neighbors seemed to agree with me, as they had never seen such a thing before.

This spring a new test came. During winter one-half the bees died of dysentery. Not only my bees, but all in this "region round about." About Jan. 1 the hives began to be soiled, and the stench from the cellar showed a bad condition of things. I could do nothing only give more ventilation, keep the entrance to the hives from getting clogged up, and then—wait for a fine day. March 15 we took them out of the cellar. My poor pets! We think it was the black-strap-sort-of-honey that they gathered so much of last season—flax honey some say—as we never saw it here until they began to raise so much flax in the neighborhood.

If a bee-keeper can clean frames, combs, bottom-boards and hives for two weeks daily, where bees have been badly affected with dysentery; dry off the soured, spoiling combs in the kitchen, and still be full of hope and enthusiasm for the future, then I take it there must be a spark of the divine afflatus there, which is said to burn in the bosom of every born bee-keeper.

I will be able to save 20 colonies, if the weather is no worse than the last two weeks. MRS. B. J. LIVINGSTON.

Center Chain, Minn., March 31.

Convention Notices.

MINNESOTA.—The regular semi-annual meeting of the Southern Minnesota Bee-Keepers' Association will be held on the first Monday in May, 1895, at LaCrescent, Minn. All bee-keepers invited. E. C. CORNWELL, Sec.

Winona, Minn.

ILLINOIS.—The spring meeting of the Northern Illinois Bee-Keepers' Association will be held at the residence of H. W. Lee, in Pecatonica, May 21, 1895. It will be held one week later if it is a stormy day.

New Milford, Ill. B. KENNEDY, Sec.

CONNECTICUT.—The fourth annual meeting of the Connecticut Bee-Keepers' Association will be held at the Capitol, at Hartford, Wednesday, May 8, 1895, commencing at 10:30 a.m. All interested are invited.

Waterbury, Conn. MRS. W. E. RILEY, Sec.

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Mrs. A. A. Simpson, Swarts, Pa.
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W. H. Putnam, River Falls, Wis.
J. W. Rouse & Co., Mexico, Mo.
Leininger Bros., Ft. Jennings, Ohio.
Hufstedler Bros., Clarksville, Tex.
Walter S. Pouder, Indianapolis, Ind.
Wm. H. Bright, Mazeppa, Minn.

Binders for this size of the American Bee Journal we can furnish for 75 cents each, postpaid; or we will club it with the Bee Journal for a year—both for $1.60. We have a few of the old size (6x9) Binders left, that we will mail for only 40 cents each, to close them out.

The Secret of Success.—The great secret of success in any line is to keep abreast of the times, and to be ready to change your way of doing business whenever a better way is presented. This is especially true in selling farm products. With the perfection of the shipping systems of the country, farm produce can often be sold to good advantage in the markets of our large cities. It is merely a matter of getting the right kind of a firm to sell the goods for you. The firm of Summers, Morrison & Co., whose advertisement is found in this number of the Bee Journal, makes a specialty of receiving shipments of all kinds direct from the producers, and they have a large trade from this source. They make prompt sales at the highest market price, and send prompt returns. They receive and sell farm produce of all kinds, and solicit shipments of the same. Write them, and they will send you prices and shipping tags, and any information in regard to the Chicago market that you may want.

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Honey & Beeswax Market Quotations.

CHICAGO, ILL., Apr. 18.—The supply of comb honey is very light and looks as though all would be sold, unless it be some California that is being spread upon the street. Best white comb brings 14c.; dark, 8@10c. Extracted, 5½@7c., according to quality, body, flavor and package.

Beeswax, 28@30c. R. A. B. & Co.

KANSAS CITY, MO., Apr. 18.—The demand for comb honey is light, and good for extracted. We quote: No. 1 white comb, 1-lb., 14c.; No. 2, 12@13c.; No. 1, amber, 11@12c.; No. 2, 8@10c. Extracted, 5@6½c.

Beeswax, 22@25c. C. C. C. & Co.

CINCINNATI, O., Apr. 19.—Demand is quiet for all kinds of honey, with a fair supply. We quote: Best white comb, 12@14c. Extracted 4@7c., according to quality.

Beeswax is in good demand at 25@31c. for good to choice yellow. C. F. M. & S.

CHICAGO, ILL., Mar. 18.—Demand is good for all grades of honey excepting dark comb. We quote: Fancy comb, 15c.; No. 1, 14c. Extracted, 5@6½c. J. A. L.

PHILADELPHIA, PA., Apr. 1. — Choice white clover honey is getting very scarce at 14c. Dark and poorly filled sections, 8@10c. Demand is falling off on extracted, prices ranging from 4½@7c. Strictly pure white clover very scarce at 10c. Beeswax arriving more freely and selling at 30@31c. W. A. S.

NEW YORK, N. Y., Feb. 20.—We are gradually working down our stock of comb honey, and the indications are that we will succeed in disposing of all of the white honey and possibly all of the dark during the spring, at following quotations: Fancy white, 1-lbs., 12c.; fair, 10c.; buckwheat, 8@9c. The market is well supplied with extracted honey. Demand is fair for choice grades, while common stock is neglected. We quote: White clover and basswood, 5½@6c.; buckwheat, 5@5½c.; Southern, 45@55c. per gallon, according to quality. Beeswax firm and in good demand at 30@31c. H. B. & S.

BUFFALO, N. Y., Mar. 16.—The honey market is getting quite well cleaned up here. We quote: Fancy, 13@14c.; choice, 11@12c.; buckwheat and commoner grades, 7@8c. Extracted is in very light demand here, and we would not advise shipments. B. & Co.

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Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Feeding Up for the Fruit-Bloom Flow.

Query 968.—My bees have abundance of fruit-bloom, but are never strong enough to store apple honey in supers. How would it do for me to commence feeding very early, so as to get colonies as strong in fruit-bloom as they usually are in June?—Vermont.

J. A. Green—I do not think it would pay.

Mrs. L. Harrison—I would not recommend it.

Rev. M. Mahin—My judgment is that it would not pay.

Jennie Atchley—I don't think it will pay you to try this in your latitude.

B. Taylor—I have not found it best to try to rear too many bees early in the spring.

H. D. Cutting—You could not do it in Michigan, and I don't think you can in Vermont.

Prof. A. J. Cook—Will there be enough time so you can get them as strong? Is it not too early?

Dr. C. C. Miller—It sounds very pretty in theory, but as a rule it doesn't pan out well in practice, I think.

Mrs. J. N. Heater—Here the extra feed and trouble would be worth more than the fruit-bloom honey secured.

Jas. A. Stone—I do not think it would work, for I have had strong colonies at that time, and still they gave no surplus.

G. M. Doolittle—I do not think you can get them strong that way. Try one or two and report results in the American Bee Journal.

C. H. Dibbern—It is very difficult to get bees strong enough to store surplus as early as fruit-bloom time. I never succeeded in doing it.

P. H. Elwood—Read the book called the "Blessed Bees," but don't try the experiment on very many colonies. You might get rich too fast.

Eugene Secor—I doubt if it would pay. The honey obtained is not the best. And then is there not a gap after fruit-bloom? But you might try it and report.

Dr. J. P. H. Brown—If there is a great interval between your apple-bloom and your chief honey source, I would not feed unless your orchards cover many acres.

E. France—I don't think you can get your bees as strong by fruit-blossom time, by feeding, as they are in June. The weather is too cold for rapid breeding early in spring.

Chas. Dadant & Son—That is an experiment that might succeed, but there are some risks to run should the fruit-bloom pass in bad weather, and no other bloom come for several weeks.

Wm. M. Barnum—This early feeding business is all right if done right; but it is a dangerous business for the inexperienced. As a rule, I wouldn't do it. If you commence early, it will start brood-rearing at once at a considerable increased speed; then should you suddenly stop, and a cold spell came on, the bees will tear out all the brood started, and get in a condition that will retard them, when they should be making preparations for a busy season. Don't attempt it unless they are starving.

J. E. Pond—Try it and see. You may or may not make a miss of it. In any case you must be on the lookout for sudden changes, else the brood may be left uncovered and be found dead from the frost.

W. G. Larrabee—If you feed too early in some warm spell you are liable to get more brood than your bees can cover, then get some cold weather and chill the brood, thus doing more hurt than you have done good.

G. W. Demaree—It won't pay you. My bees have an abundance of fruit-bloom, but the weather so early in the season is hardly ever steady enough to give the bees the opportunity to gather the nectar in quantity sufficient for breeding purposes.

Emerson T. Abbott—I do not think it will pay to feed up for fruit-bloom. It is not best to feed too early, as there will be nothing for the bees to gather between fruit-bloom and other honey-flows. Early feeding frequently causes the loss of many bees.

R. L. Taylor—It can't be done that way in your climate. Let them enter the winter strong, and in the best condition otherwise, let them winter well, in the spring see that they have a superabundance of stores, and you have done the best you can for them.

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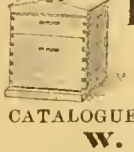

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35th Year. CHICAGO, ILL., MAY 2, 1895. No. 18.

Contributed Articles.

On Important Apiarian Subjects.

The Bees for the Harvest.

BY FRANK BENTON.

In the colder portions of our country each colony of bees as ordinarily brought through the winter will be found during its early spring flights to contain only a small part of the adult workers necessary to take fair advantage of any honey-yield that is to follow. If an important honey-flow occurs early in the season it is impossible to secure the full advantage of it. The bees to gather the honey are lacking.

The young workers do not normally, even though honey be plentiful in the flowers, enter the field as gatherers before they are about two weeks old; adding to this the three weeks required for the development from the laying of the egg to the appearance of the imago or perfect insect, we see that all eggs to produce workers for a given harvest must be laid five weeks or more before that harvest begins. But as the amount of brood which may be developed at one time in a hive is to a great extent limited not alone by the fecundity of the queen, but also by the supply of food, the number of bees to cover the brood, and the temperature about the brood-nest, it is evident that the five weeks required to get one generation of bees ready for the field will not suffice to render the hive suitably populous for a given harvest. It is not at all difficult to have queens whose fecundity is even greater than the ability, early in the spring, of any colony to care for their eggs and developing larvæ and pupæ. Nor will the careful bee-keeper neglect the second point mentioned and let the colony lack for food. But the other conditions which limit the increase of population are not so easy to meet. We may house our bees or pack warmth-retaining material about the brood-nests so as to keep the temperature moderately warm and as even as possible, and may thus favor brood-rearing. But we find practically that the only way to secure the desired number of bees in each hive for a given harvest is to see that brood-rearing is going on at a rapid rate some time previous to the five weeks' limit noted. In other words: three weeks or more must be added to this period in order to produce workers in sufficient numbers to care for the main brood which is to develop into the field-bees for the given harvest. Thus our hives, all of which contain at the opening of the spring comparatively few bees besides those which went into winter quarters and which therefore are too old to avail much as gatherers, must, in proportion to the bees they contain, be well stocked with brood eight to ten weeks before the opening of the honey-flow. Moreover, this brood-rearing should be kept up without interruption as long as it is expected that the workers can be utilized in the given flow.

White clover being, in our middle latitudes, an important yield which usually begins early in June, it follows from the above that our hives must be well stocked with brood toward the end of March. It has been argued by many whose experience it has always seemed to me should have taught them better, that early brood-rearing was disadvantageous; some perhaps merely for the sake of the notoriety to be gained by being quoted as differing from the majority—have even gone so far as to say that brood-rearing should not be begun before May 1 in our northern States. It is plain from the facts stated above, that such a plan could only contemplate the securing of a crop of honey in July or later, and would lead to great disappointment in localities whose main honey-flow comes earlier and where no midsummer or fall yield occurs. But in most localities in these States there are, aside from these later yields, usually two good honey-flows before midsummer—namely: that from fruit-blossoms and that from white clover just mentioned; while in some places a third yield is added—that from tulip trees (*Liriodendron tulipifera*) called in some localities poplar and in others whitewood trees. Where these occur there is no reason why the full advantage from all of them should not be taken, yet I venture that not

Dr. J. P. H. Brown, Augusta, Ga.—See pages 284 and 285.

one bee-keeper in twenty realizes how far he is from fully utilizing these earlier honey-flows—especially that from fruit-bloom. When we are obliged to take time after the middle or latter part of April to develop strength in a colony in order to have it ready for a harvest, the early honey-flow passes with no return beyond what it furnishes toward building up.

Successful wintering is then the first essential toward securing the full advantage from an early honey-yield. And by successful wintering I mean that the colonies ought to reach the earlier honey-yield in condition to take full advantage of it, *i. e.*, in such condition as regards numbers and health as they are ordinarily found *after* this early yield has passed.

Let us see what course Nature pursues in preparing her willing subjects—the honey-bees—to pass successfully the ordeal of winter and enter upon a season of prosperity. Perhaps we can profit by imitating the plans of the ancient dame who is supposed to have been wise even in the long-ago ages when our remotest ancestors were but inert molecules.

As a matter of fact strong colonies of bees located in hollow trees or in log gums or box-hives, and whose combs are therefore undisturbed in their natural arrangement, if well

provisioned, and so constructed as to be fairly protected from extremes of weather, to permit the escape of surplus moisture while at the same time retaining during the colder portions of the year as much as possible of the natural heat generated by the bodies of the bees, are, barring natural accidents or provisions having no connection with the above-named conditions, *always* in excellent condition on the opening of spring and ready to fulfill the double work for which they were created, namely: 1st, the pollenizing of blossoms to the end that more and better fruits and seeds should be borne; and, 2nd, the collection and elaboration of a valuable sweet. I say *always in excellent condition*, for, if the conditions named above are present, the colony will withstand our coldest winters without freezing; nor will it starve if well provisioned, for that implies an abundance of good stores suitably disposed for the bees to reach them during any kind of weather; nor will inclement weather cause the colony to become diseased as long as the bees and their habitation are dry. Colonies in frame hives can be put into practically the same condition as those box-hive colonies. I have taken as examples above: indeed, if we fully understand those conditions we can be more sure with frame than with box hives that they are uniformly and exactly complied with.

Some one might argue that even when the preparation of the bees for their most trying season is left wholly to Nature, such conditions are not always established by our good mother as to most favor the bees. They die. Admitted. Yet this by no means controverts what I have just claimed, for Nature, in working out her laws, purposely sets certain destructive forces over against our protegees. She looks well to all her creatures, and only exceptional merit will cause her to let one kind flourish to the exclusion of others—so nicely is the balance adjusted. And if no checks had been provided the bees would soon have overrun all.

Perhaps a study of these same natural agencies which are set as a limit to bee-life will also be a good lesson—will show us what we must fight constantly and what to avoid. In a state of nature we find colonies that go into winter with queens decrepit—either prematurely or after years of good service, rendering them unable at the most critical period—late winter and early spring—to keep up the population of the hive, or again repeated swarming may have unduly reduced their numbers; such weak colonies may not be able to keep up sufficient heat to drive off the moisture surrounding the cluster; it gathers and trickles down over the combs and bees rendering their food sour and themselves unable to withstand a low temperature. The soured food is sure to bring on dysentery if the bees are confined to it for any length of time, or the dampness of the bees themselves combined with chilling of their bodies will produce the same effect. Or again, an unfavorable season has prevented their securing an abundance of stores, or what they may have obtained is perhaps not so located that severe weather will find them able to reach it. Or the bees may have failed to find the most suitable habitation, such as would properly protect them from inclement weather and permit evaporation without great loss of heat, yet give them pure air. All such causes, unaided by man, combine to exterminate thousands upon thousands of colonies every winter. And man, with his interference in the brood-chamber of the colony, and in the surrounding conditions is often another destructive agency.

I cannot give here at length the details as to the plan of wintering which has resulted from the foregoing considerations together with my success and failures of over a quarter of a century—much of the time in very cold climates. The principle is, however, simple, and all who will may apply it. Indeed, it is nothing but what all have been trying to do, namely: to keep the bees warm and dry, furnish them with good food always accessible, and with pure air. This can be carried out either in-doors or out-doors, but cellar-wintering or wintering in special repositories introduces into the problem the possibility of complications, and for the majority, therefore, I feel sure the out-door plan is best. For the North, however, all of the ordinary single-walled hives are, for this purpose, an abomination, and not to be tolerated at all. Most of the double-walled hives should be put in a category near to those just mentioned.

The brood-combs upon which the bees are to be wintered, and which contain the winter stores, should be surrounded closely on all sides, above, and below, with six or more inches (according to severity of climate) of porous, yet warmth-retaining material—woolen goods and newspapers are best; there must be several inches of space between the material that is over the bees and the roof of the hive, and this space must be freely ventilated; but not a drop of water must be allowed to reach the packing from outside the hive; the combs must be six or more inches above the bottom packing; the entrance or flight-hole must be wide, so as to give ample lower ventilation, and, where it reaches the alighting-board, preferably ten inches below the bottoms of the combs; between the latter and the flight-hole there should be a screen to prevent drafts of air from rushing against the combs; the food should be well-ripened honey or properly-made syrup, and either case a plentiful supply stored mostly above the cluster of bees; hence if frames of the Langstroth shape are used, they should be on end for the winter; it is best to have a good supply of pollen in the combs; vigorous queens and plenty of bees bred the latter part of the active season are essential. The colony is to be put into this condition before severe freezing, and not disturbed after that, if the best results are expected, until settled and moderately warm spring weather has returned.

As the apple-bloom comes in May, stimulative feeding for this harvest may commence in March. At that time the bees will have been breeding for over a month, and gentle stimulation with thin food at night, without permitting any loss of heat and without manipulation nor disturbance, will not induce flying out during unseasonable weather. The stores in the combs being ample, brood-rearing will go on apace, and *apple-blossoms will find us ready with the bees for the harvest.*—*Read at the Indiana State Bee-Keepers' Convention.*

Washington, D. C.

A Bunch of Very Short Kinks.

BY J. S. SCOTT.

ANT PREVENTIVE.—A string kept saturated with coal-oil and tied around the hive will prevent ants from nesting under the cover.

SECTION-HOLDER RESTS.—Tin rabbets are the best rests for section-holders.

CAPPING HONEY.—A queen whose bees cap the honey so it has a watery appearance should be superseded by one whose bees cap the honey white.

COTTON-WASTE FOR SMOKER FUEL.—After four years' trial, I find refuse cotton-waste from the car-shop the best fuel for the smoker.

FIFTY BETTER THAN A HUNDRED.—Fifty colonies of bees well managed will make more money (with less labor) for their owner than 100 colonies carelessly handled.

EQUALIZING COLONIES.—A good way to equalize the strength of colonies of bees in the spring is to change the hives around.

A BEGINNER'S "KINK."—A modest beginner in apiculture in Utah has discovered a plan by which a queen-trap can be placed at the entrance of the hive which will catch the queen and allow the bees to pass out through the trap, but on their return they pass directly into the hive without having to go through the perforated zinc. Springville, Utah.

Bottom vs. Upward Ventilation of Hives.

BY DR. A. S. MARTIN.

Bees spare neither time, pains nor material in the effort to make their hive perfectly close in all its parts, except the entrance. If permitted to have their own way, they, with this exception, invariably close every opening that can give vent to the air of the interior of their abode. This fact I regard as very significant—one of the many beautiful instances which we observe of the subserviency of irrational instinct to intelligent design. What, then, is here the design of Nature? If I err not, it is to give them perfect control, that they may regulate at will the temperature and ventilation. Why should we thwart Nature, and rob them of this control? How is it possible for us to adjust the supply of air to their needs? How can they be comfortable in a flue? Experience has taught us that in cold climates the hive should have frost-proof roof and walls. Why has not observation taught ere now that its interior should be a *dead air space*—that both roof and walls should be absolutely impervious to air? The external air cannot of itself enter such a hive as this, *however ample the entrance*, unless the entrance be exposed to strong currents.

Upward ventilation seems to be founded upon the prevalent notion that bees hibernate, or are helplessly dormant during cold weather. You may catch them asleep, 'tis true. But they are as easily awakened as an infant, and are never all asleep at the same time. Place your ear against a hive at any time, and be convinced. Rap upon it and note the quick response. Dead silence is evidence of starvation, or total demoralization. Did it ever occur to you that there is a mean-

ing in this constant buzzing? Why are they thus constantly vibrating their wings? I have subjected them to upward ventilation when the mercury stood at 10° below zero. I could distinctly hear the noise they made at a distance of 30 feet. They had over their heads a woolen cloth and a chaff cushion four inches thick. I am confident there was no sleeping done in that hive for a week. I have lifted a comb from the middle of the cluster into the air at 15°. A few would fly and perish in half a minute. The others gathered into dense struggling masses, the outer ones vibrating their wings rapidly without extending them, and forcing their way as rapidly as they could to the interior of the mass.

Now this is just what takes place in your ventilated hive. Bees need, and should have, repose in winter. But do you think that if you were a bee, you could sleep a wink with somebody all the time scrambling over, or rooting and scratching under you, and pulling the cover off? The evil is greater or less, if the ventilation is more or less restrained. The air of the hive—at least a portion of it, bearing with it the warmth—escapes through your sacking and packing. A strong colony may not seem to miss it, but a weak one has no heat to spare. It is expensive to the former, disastrous to the latter. In a close hive, there are at all times agencies sufficiently potent. The descent of the carbonic acid gas, generated in the act of respiration, compels the ascent of an equal bulk or volume of atmospheric air right into their midst. They can pump up more if they need it. This gas bears with it most, if not all, of the redundant moisture of the hive. What use have they, then, for your absorbents? They abhor them as much as they do a flue, as is proven by the way they varnish everything about them. *Air is the proper absorbent of the moisture of the hive.* Bees use it extensively in summer to ripen their honey, and for other purposes. Why should it be thought that they cannot, if need be, use it in winter? Bees can and do regulate the temperature and ventilation perfectly in a close hive in both summer and winter, granting them free access to the external air. But they lose this control in any other.

"Let us hear the conclusion of the whole matter." Let your hives be so constructed, or protected, that there shall be no danger of frost penetrating, or of condensation of moisture from cold, in their interior. Let their sides and tops be impervious to air, their bottoms admit the air *freely—abundantly.* In other words, let your hive be a warm, frost-proof, inverted *cul-de-sac*—a dead air space, in which it shall be impossible for currents of air to exist, save such as the bees themselves create—they having full liberty, and ability, by reason of unrestricted access to the external air, to ventilate the hive as they see fit. Trust them. They will do it wisely. Give plenty of air to your bees, but do not by upward ventilation give your bees to the air. Roanoke, Va.

Scarlet Clover—Trifolium Incarnatum.

BY J. COLBY SMITH.

Seeing several items in the Bee Journal, some of which are misleading, I will endeavor to put them straight, as regards the cultivation of scarlet clover.

While traveling in the Southern States I saw fields of the cotton-plant in bloom—to my mind it was the most handsome plant I had ever seen in cultivation. I had not seen scarlet clover, with the field covered with its crimson carpet, and the 5-banders robbing it of its nectar. It certainly is "a thing of beauty." As the old saying goes, "Handsome is that handsome does;" if not disputed, scarlet clover will fill the bill.

It is an annual, can be sown in corn at the last working, in the tomato field, in the peach, pear, plum or apple orchard, by itself, but best of all places is with buckwheat. I have never known it to miss with it. Sown year after year with buckwheat, the soil gains in fertility. Once plowing does for both crops. It is the first clover to bloom, and is a number one honey-plant. You can cut it for hay, but it being very sappy, it takes it a long time to cure. Fed green, it cannot be surpassed by any plant with which I am acquainted. A great plant for soiling, it also makes good ensilage. If cut early, it blooms again, or, rather, if cut before it blooms, it grows up and blooms later.

Scarlet clover produces as much per acre as red clover, and when cut for seed, from three to ten bushels per acre. The cutting for seed must be done (to bring the best results) in damp weather or in the night. I cut with a self-rake reaper. This machine is used by all the seed-growers here.

As to sowing in the spring, it is not a success here—the weeds outgrow it at the start and choke it out. On clean land it would be all right, and would bloom in September. It will not grow with wet feet—it requires dry land, and will grow in any soil that is well drained. It is a great success in New York, Massachusetts, Connecticut and Pennsylvania, and pleases the growers and the bee-keepers. We have had zero weather the past winter, also in 1893. I have 30 acres that is looking fine. Sow 10 pounds of seed to the acre, and *cover it.* As it is generally sown in dry weather, or rather when the ground is dry, a depth of one or two inches won't hurt it.

Now for the honey-farm: Sow scarlet clover with buckwheat, Alsike next, or on wheat, or with oats. The bees get the scarlet first, Alsike second, buckwheat third, etc. Now if you have any land left, sow sweet clover.

If any subscribers have any questions to ask concerning this matter, I shall take pleasure in giving the desired information. In that way I may in a measure repay for the useful advice I have received from them through the columns of the valuable American Bee Journal. Willow Grove, Del.

Proposed Tiering of Brood-Frames for Winter.

BY J. A. GOLDEN.

That's a good article on page 166, by Charles Dadant. His theory is so explicit that it will be hard to confute.

On page 179, Mrs. Durbin asks for information in regard to her proposed plan, by placing four frames above each other, and fill the vacant space with cushions. My answer is that it would not be advisable, for several reasons, of which I mention one or two, that you may study them. 1st, in putting the bees up for winter, you break the brood-clusters, and *that* is a serious mistake just at that time of year. 2nd, causing about two inches of wood and air-space between the upper and lower combs—a very objectionable feature. So I wouldn't advise you to try the experiment, but will tell you what you can test, and will result satisfactorily so far as wintering, breeding up quicker, and surplus is concerned, but not so easily handled as the dovetailed hive or frames.

Have a hive made thus: Inside measure, hive body, length, 15½ inches, width 13½, depth 13. Take nine dovetail or Langstroth frames and cut the top-bar 16¼ inches, bottom-bar 14 inches, end-bars 12⅜. Nail up snugly, put a 3-inch starter in each frame, place the frames in the hive, put the hive where you want it to stand, and call this your experiment hive; ask your husband to give you the first swarm that issues (and I think he will smilingly grant the request), and hive them in your experiment hive. Then when those frames are filled with combs, honey and brood, lift one out, and you can see at a glance what Mr. Dadant has been trying to make plain in his discussion on the winter problem; also you will see in this frame all of the advantages of a deep frame over the shallow, after you have tested one winter; and don't forget to note the difference in the spring, between it and other colonies, in building up rapidly.

This hive requires a super holding 24 4¼x4¼ sections. The top is made hood-fashion, with a small cleat nailed on the inside, which rests on the hive-body when the hood cover is put on, thus letting the hood project down all around, so that no water can get into the hive. This hive gives you nearly the same capacity of brood-comb as the 10-frame Langstroth size. It is my opinion that the day is not far distant when there will be a revolution in regard to size and shape of hives. Reinersville, Ohio.

Mortality Among the Bees—Empty Combs, What Shall We Do With Them?

BY WM. S. BARCLAY.

From personal observation in my locality, as well as from general reading gathered from widely extended sections of our country, I very much fear that the winter of 1894-95 will be looked back upon as one which caused great disaster to the interests of our bee-keeping public, if not the entire extinction of many heretofore prosperous apiaries.

In my location (western Pennsylvania) I feel safe in asserting that at least 80 per cent. of all the bees have died—in some instances whole apiaries have been wiped out, and empty hives and empty combs attest the loss, and are sorrowfully piled up as a monument to our deceased industrious little workers. Empty combs, did I say? With us, it has been our good, or bad, fortune to have many combs at least one-third filled with honey, and now, fellow bee-keepers similarly situated, I will try to tell how to use these combs to the best advantage.

It would appear proper, however, at first, that a cause

should be assigned for this great mortality among our bees. With us it is not certainly chargeable to intense cold weather, as about the lowest range of the thermometer was from 5 to 8° below zero, while in previous winters the register showed as low as 16 to 20° below zero, but always a change within three days to as high as 15 or 20° above. I assert that the cause of mortality was, first, humidity (*the greatest evil*), and second, the *long continued low temperature*. There would be times for three weeks in succession when the temperature ranged between 10° above to 5° below, with no let-up or cessation; and in a record covering a period of over 40 years, I find nothing approaching this long-continued low temperature. During all this time, of course, our bees could not move, or exchange places on their combs. But with us, the moisture in hives, thus causing dysentery, was the great cause of our many losses. As regards myself, I feel satisfied that had I been able to properly pack my bees, I would have avoided great loss, but my health was such that I could not do so, and my bees were on the summer stands exposed to all the rigors above referred to.

Now about the empty combs—our stock in trade, as regards the future. And here let me drop a word to those who advertise bees for sale in the American Bee Journal. You want to sell bees, and want also to sell queens—why not in selling bees by the pound, also agree to send *a queen introduced with those bees*, and thus save the bee-keeper the trouble of introduction? Pack them in wire cages at so much per pound with queen and bees together. Should this be done, the bee-keeper can then fill his hive with as many combs as he pleases, and hive bees and queen in the same manner as a swarm. As to the bees, an old bee-keeper would as soon have black as Italian or other bees, so that only the queen should prove pure Italian or other blood, according to price paid.

But as many of us may not be able to get these bees even at low prices, and will still have our empty combs to protect from the danger of the moth, let me here suggest that both the hive and the combs be thoroughly cleaned of dead bees and other refuse, then be well dried out, and the combs replaced about 1½ inches apart, first taking a woolen cloth (about 8 to 10 inches square) thoroughly saturated with ground-oil (petroleum), and spreading it neatly in the bottom of the hive; after this put the bives, well ventilated, in a dry, cool place—a very dry cellar is probably the best place.

Beaver, Pa., April 15.

Providing Honey-Sources for the Bees.

BY N. T. SMITH.

In reading of so many failures to secure a profitable crop of honey last year, it has occurred to me that if the people who are interested in bee-culture were to work to their interest by providing for the future, soon these failures would be less frequent. Instead of merely working one day after another throughout the season, and season after season, as long as they keep bees, accepting each year what is gathered for them, and hoping for more next season, I think they would double their profits by doing one week's work each year for some future time.

If a man planted a field of grain, and it is drowned out, he does not sit down and wait until next season and plant the same field under the same conditions. No; he goes to work and looks up a way to dig an outlet, then digs smaller drains into this, thus lessening the chances of failure by wet weather.

Now if bee-keepers would sow a small patch of buckwheat, it would probably afford good pasturage while in bloom, and it can be raised on almost any kind of land; and if one had not the time to spare, there is some one in the neighborhood who probably would be glad to avail himself of the chance to put the seed in for a share. This will no doubt help for the coming season. Then, a small field of Alsike clover is quite sure to yield a crop of honey next season, if sown this spring, which would be two steps towards preparing for the future, if we may term it such.

Now by doing this each spring, we can take care of the near future. But let us not stop at this, but try to do something for the distant future. As spring opens, would it not be a nice thing for each person connected with bee-culture to try to induce as many of his or her neighbors as possible, to set out some young basswood trees? If only a few on each farm, think of the benefits to be derived by those who will be keeping bees 15 years hence! These trees can be set along some lane fence, or in some unused ground, out of the way at present, but in after years, in the way, a source from which bees could obtain one of their necessities of life, and a luxury for us.

At this place we have a new cemetery of 20 acres. A part of this has been set aside for park purposes, and to be set out with all kinds of native trees. As soon as I heard of the arrangement, I spoke to one of the officials in regard to planting some basswood among the other varieties, and called his attention to the beauty of the tree for shade, and also in regard to its very rapid growth. He became very deeply interested, and when I gave my reason for wanting basswood, he gave his consent, and probably there will be considerable of this useful variety planted. Could it all be set with this, how appropriate would the name for it then be, if christened "Linwood Cemetery."

Now let every one who is interested in the advancement of bee-culture, see to it that there are some honey-producing crops planted, so that our bees may have a chance to show us what they could do if they had it furnished to do with. With the advancement made toward rapid and easy manipulation of our hives, let there be some advancement toward the production of something to pay us for manipulating them.

Weston, Ohio.

Something More About the Catclaw.

BY J. A. SCHUDDEMAGEN.

On page 86, I noticed the botanical name of catclaw, as given by Emerson T. Abbott. To those interested, I will add the following, as I live in the catclaw region:

There are three distinct varieties here. First in spring blooms the mountain catclaw, very early, and is often partially or totally destroyed by frost. In 1894, the winter being very warm, it had budded out and was killed by the blizzard of Jan. 26. The buds hang on the bushes or small trees like berries, having a small, long stem. When open, the bloom is a round, fuzzy ball resembling the touch-me-not, and the color of bloom is creamy white.

Next comes the large catclaw. It begins to bloom from the 5th to the 20th of May. The trees grow 15 to 20 inches in diameter, and up to 20 feet high. Its creamy-white bloom is long, often 3 inches, and the trees are often so covered that they hide the leaves. It stays in bloom from three to six weeks in a good season. When there is enough moisture in the ground the trees do not come in together. In a good flow a strong colony can store 100 to 150 pounds on it alone. It generally blooms twice—the second time in July, and if the weather is right it makes another flow. It is, however, very sensitive to weather, and a rain in the first, or fierce heat in the second bloom, blasts it, and it gives no honey. With all its drawbacks, it is, in my opinion, as good a honey-plant, and more certain, than basswood. The quality of the honey is equal to clover, linden, mangrove, or sage.

Then we have what we call the "gravel-bar" catclaw. It is a running, creeping bush, much like a climbing rose; grows on the gravel-bars along the creeks, and is the thorniest of all. If one gets tangled up in a bush, he can be glad when he gets out, if he has not left part of his "pants" and flesh on it. There is not enough of it to produce any surplus honey. The bloom is round, like the first; color, pink.

Then there is another variety in Mason county, in habit much like the above, growing all over the hills and mountains. If I am correct, the color of the bloom is yellow.

Catclaw derives its name from its thorns—every thorn being curved backward in shape, just like a cat's claw. The first two varieties mentioned have small thorns, but the last two have thorns just about as large as a cat's claw, and just as certain to catch one if he comes near them.

Catclaw grows in the arid region west of Austin and San Antonio—elevation about 800 to 1,000 feet above sea level. Farther west, if my information is correct, when the elevation gets higher, it becomes scarcer. Sabinal, Tex.

Too Much "Monkey Work" with Bees.

BY J. W. BITTENBENDER.

(Continued from page 168.)

The hive of my first swarm, hived ten days before, was already full, and ready for the surplus boxes, while the divisions were only building comb fairly well. I made the divisions by dividing the comb, putting half the comb in the new hive. I did get one new swarm from one of the divisions, when the young queens hatched, but the other five did not cast any swarms, and barely got in condition for winter. At the end of the honey season I could easily figure up the best result in favor of the rickerty-rackerty let-alone hives, and it stood as follows:

From the crooked-comb hives, four good swarms and 68

ponnds of surplns comb honey. This I got from the first two new swarms. In those days we did not have sections, but the old five-pound honey-boxes, six to a hive, one colony filling eight of these boxes. And the finely arranged, movable-comb hives had nothing to their credit excepting seven feeble colonies.

The record was taken in the fall of 1874. In the spring of 1875 I had but nine of the monkeyed-with colonies left out of the 13, and all six of the let-alone colonies, and all in good condition. This proved to me that there was a great fonndation here for experimental work, and I followed it up.

Now the reader will readily see that the heading of my article is suitable for my subject—*too much monkey work.* While we can assist Nature once in a long while, it does not prove that every time we operate, or go over the same operation it is always the outcome of the best. We must study the nature and habits of the honey-bee to become a successful apiarist. It is proper to make examination inside of the hive, but remember you do this at your own expense, as I will prove to you plainly further on. If you wish to make experiments, it is much the best way to use a colony for that purpose only. After observing for five or six years, I became satisfied that to go and tear up a colony of bees was a great detriment to the colony, and a great loss to the bread-and-butter side of the question.

In 1886 I made an experiment on this subject. In June of that year we had a good honey-flow, beginning from the 6th to the 24th. I put two colonies on two scales, selecting two that tipped the scales about the same for eight days. On the ninth day we opened one of the hives in the morning. In the evening the colony was three pounds short. The next day it was not disturbed, and held its own a little better. The next day it was not opened, and it tallied nearly with the unopened one. The following day I opened the other hive to see if it was due to the strain of bees, but with the same result—3½ ponnds short—an average of three pounds short, or a loss of three pounds for opening the hive. Now, supposing I had had 50 hives and opened them all, I would have lost 150 ponnds of honey for that. Now, yon will see that this will harmonize with my first year's experience with monkey work.

Knoxville, Iowa.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Feeding Royal Jelly to Drone-Larvæ.

1. Have you tried feeding royal jelly to drone-larvæ in order to increase the size and add to the longevity of bees? 2. What has been the result? 3. How, and at what age of the larval state, is it best to feed? IOWA.

ANSWERS.—I'll answer your questions all in a lump. I never did any feeding of drone-larvæ, and I don't know anything about it except what I learned from Dr. J. P. Murdock. He developed a large strain of bees, and says he paid special attention to feeding the drone-larvæ; but what he fed them I don't know. He said it took him some time to learn how to feed, and in his first attempts he killed the larvæ. I don't know just how much larger than common his bees were, for I didn't try to measure them, but I did measure some comb he sent me, and there was no question about the increased size. Some of the worker-cells were nearly large enough to go four to the inch.

Feeding After Transferring—Going Slow with Bees.

1. I would like a little more light on feeding. I am transferring from old gums and box-hives into 8-frame dovetailed hives, saving all, or about all, the brood and but little honey. I save and put in all the straight comb that is not too old and black, and fill the balance of the hive with full sheets of worker foundation wired in. Of course I feed some after transferring for several days, or until they seem to be able to shift for themselves. The question with me is, will it not pay to feed them granulated sugar syrup and help them fill up their eight frames and get to work upstairs in the sections by the time for white clover, and thereby trade them syrup for comb honey?

2. I have agitated the Alsike clover question in this section, selling seed at cost, and thereby secured 60 or 70 acres sowed within two miles of my apiary. Is not that amount a pretty good base of supplies for my 26 colonies and their increase for next year? I believe it does not bloom the first year, or but little. I also had 20 pounds of sweet clover seed scattered in by-places within 1½ miles.

I have no doubt but what I am the man Mr. Abbott refers to on page 235. He advised me to go slow, when he was here last fall; but what in the name of the board of trustees would I do with 75 acres of Alsike clover, great patches of sweet clover, and plenty of white clover, with *only two colonies* of bees! I would be in as bad a fix as the old backwoods farmer who lost $2,000 in one year by not having enough hogs to eat up the acorns!

I have made some mistakes already, and paid for them, and probably will make more and pay for them. My selection of the dovetail hive may be one, but I haven't found it out yet. In a few years hence I may look back and wish I had taken Mr. Abbott's advice, and gone a little slow; but my present bee-fever isn't the slow type of the malady.

Russellville, Mo. L. G. C.

ANSWERS.—1. Theoretically, it would look as if there were millions in it, but sometimes things don't pan out all right in practice. I saw a statement somewhere lately from Christopher Grimm, a man of large experience, saying he was satisfied after trial that spring feeding did not pay. Of course every one knows that feeding to prevent starvation is good, but beyond that the case is not so clear. Several things are to be considered. May not the feeding prevent them from getting stores from natural sources at the time of feeding. Sometimes bees are getting a good bit of honey when you don't know, perhaps, of a single plant that's yielding. If you feed enough to crowd the queen at any time, that's worse than wasted. If you give so much that it will be crowded into the super to make room in the brood-nest, that's worse still. Go a little slow on it, and leave some without feeding, and see how the two compare. And at the same time I believe it might be a good plan for you to leave some without transferring, and see how the outcome compares with those transferred. Then if you want you can transfer three weeks after swarming.

2. You've done a big thing in getting that Alsike planted. As to numbers, I should say to you, if you should ask me: "Bro. Abbott is right. Go slow until you have more experience. You'll find it an easy thing to get up to 50 or 100 and then drop down to nothing." But if one of your neighbors should ask me behind your back, I should say: "Yes, that man C. is a headlong sort of a chap. Still, a man that has snap enough to get his neighbors to put in so much Alsike clover for him is not likely to be caught very badly." Let's know how you come out at the end of the season, and also next spring.

Question on Removing Sections from the Hive.

On page 153 I asked the cause of the sections in the lower super pulling apart when removing them from the hive. You can infer from the question that I have a great amount to learn about bee-keeping. I have used the Simplicity hive for several years without anything between the super and brood-frames. I did not know until I began reading the Bee Journal that anything was needed between them. I am going to use another hive for swarms this season. Can I do anything with the Simplicity hives to prevent the bees from fastening the sections and brood-frames together.

I stated before that I had one colony that had not cast a swarm in four years, from which I took 75 pounds of fine section honey last season. This is a colony of hybrids, in a 10-frame two-story Simplicity hive. My bees are all hybrids. All wintered well, but none are as strong as this colony.

Hannibal, Mo., April 8. S. W. S.

ANSWER.—Yes, you can manage to have very little trouble in the Simplicity with sections being built fast to the brood-frames. You have failed again to tell us what kind of super you use, but in any case you can have your sections left all right by having between the brood-frames and the super a queen-excluding honey-board that leaves a space of ¼ inch between the honey-board and the sections or super. It isn't even necessary to have it queen-excluding. The Heddon slat honey-board has no excluder zinc about it, being simply a number of slats about an inch wide with a space of ⅜ between them, having a border so constructed that a space of ⅜ is left between this honey-board and the sections. Possibly it might be better to have the space ¼ instead of ⅜, both between and

over the slats. Mr. Heddon thinks it quite important that the slats should be so placed over the brood-frames as to break joint, that is, so that the space between two slats shall come over the middle of a brood-frame. I never could see that it made any difference.

Wintering in Double-Walled Hives.

Please answer these questions about wintering bees in double-walled hives with single bottom boards:

1. Is it to the disadvantage of the colony in winter to have any more than a ⅜ or ¼ inch space between the end-bars of the frames and the end of the hive?

2. Would it be to the advantage or otherwise of the colony to have, say one or two inches of a vacuum below the frames?

3. Is a ¾-inch dead air space between the walls as good as twice as much?

4. Is it advisable to have any connection between this air space and the brood-chamber, or between this air space and the outside, as means of ventilation? ONTARIO.

ANSWERS.—1. Yes, considering merely the welfare of the bees, I think no one would claim any benefit from the space, and the more space the worse for the bees. That space is not for the benefit of the bees, but for the convenience of the operator.

2. For winter, yes, decidedly. My bees have two inches below the frames every winter.

3. Theoretically it looks as if there ought not to be much difference. In actual practice I think the greater space is found to be better, and moreover it is found that hollow walls are not found to be so good as to have the hollow filled with something like chaff, cork-dust, etc.

4. I think not.

Spacing Brood-Frames.

On page 89, if I read aright, a correspondent claims that 3/16 would be sufficient space between brood-frames. If this be so, I could profit by it. In 1893 I purchased 25 second-hand hives made to accommodate nine frames 11x13 inches, outside measure; but I experienced much difficulty in removing the first frame when capped, rolling the bees over and smashing them into the cells. I had decided to run those hives with only eight frames, and use a follower, but after studying the articles in the Bee Journal by Dadant and others, I fear this would reduce the brood-chamber too much. Do you think it would be safe to reduce the spacing to ¼ or 3 16 to get room to remove the first frame without crushing bees?

Au Sable, Mich. J. M. M.

ANSWER.—As I have not given the matter a full and thorough trial, I cannot say what would be the result with 3/16 between top-bars, but I'm very much afraid the bees would do a lot of gluing. In every case where I have measured, the bees leave a space of ¼ inch between two surfaces of comb when left to their own devices, and from that I have supposed that ¼ inch was the best space to avoid both brace-combs and propolis. Another thing: If your frames are spaced 1⅜ from center to center, I would strongly advise against closer spacing, and would a good deal rather have more than less. In any case I should want a follower so as to make room to get out the first frame.

Using Combs Where Bees Have Died.

I have lost all my bees but 6 colonies out of 40. I want to utilize all the combs I can during the summer. There are a large quantity of dead bees in the cells. 1. Will the bees take them out? 2. If not, how shall I get them out? I have neither time nor patience to pick them out. 3. Will bees use moldy combs?

Glen Rock, Nebr. C. L. C.

ANSWERS.—I feel just a little like scolding, because you don't say where you want me to answer. How am I to know whether you want the answer in the National Stockman, Gleanings, or some other paper? But a man who has lost 34 colonies out of 40 is in no condition to be scolded—I know how it is, for I once lost 48 out of 50—so I'll answer on this page at a guess.

1. Yes, but it may be worth while to make the job as light as possible for them.

2. Perhaps you may have some mice that would not object to pick some of them out for you. Put the combs where they will become very dry, and you can shake some of them out.

3. Yes. Don't give them too many at a time if they are very bad. Put a newly-hived swarm into a hive full of combs badly molded, and they would be likely to swarm out, but if given one or two at a time, they would be all right.

If you have hives with loose bottom-boards, I'll tell you a nice thing to do. Put one or even two hives full of combs under each hive of bees, and they'll keep them clear of worms, and also clean them off. No better place to have idle combs than in the care of the bees.

Canadian Beedom.

Conducted by "BEE-MASTER."

Art vs. Nature in Apiculture.

BY A. E. HOSHAL.

Some seem to think that nothing in apiculture can succeed unless done in accordance with Nature. Be this as it may, it is a fact that in other occupations of life man by his intelligence does so direct and change the course of Nature, that the results are much more to his liking than when Nature is left to herself. For instance, we plant an apple-seed, it will germinate, grow to a tree and bear fruit without man's further intervention. Man can, however, so graft, prune and cultivate such a tree, that its fruit will be much more beneficial to him than when it is left solely to Nature. In this process of pruning, grafting, etc., he has both recognized and admitted, and by results shown, that so far as this tree and its fruit is concerned, Nature is blind force, caring naught for his wishes, and when left to herself accomplishing that which is not for his best interests by producing fruit that is both small in quantity and inferior in quality. In caring for the tree he both retarded and fostered Nature—retarded her where she did not comply with his interests, fostered her where she did. From this simple illustration, which all admit as a fact, and which is universally carried out, we see, that so far as his best interests are concerned, man, by applying his intelligence can, so to speak, "improve on Nature."

In view of this very self-evident fact, I have been turning over in my mind why it is, that is so hard for many to recognize the same principle in profitable honey-production, especially when it is referred to as "improving on Nature," as though the name had anything to do with it, or that it was a sacrilege through belittling the Creator.

Let us throw aside at once this absurd idea that in order to be successful in apiculture we must blindly adhere to Nature, when the facts are, if we are to be most successful, we must both retard and foster her in the instinct of our bees according to the end we have in view. Like in other pursuits, this is the field for the exercise of our intelligence, and the one which will mightily test our tact and ability as bee-keepers.—Practical Bee-Keeper. Beamsville, Ont.

Bees Doing Well in Wintering.

BY ALLEN PRINGLE.

My bees are wintering as well as I could wish so far. They are all in the cellar repository with the exception of 10 colonies which are packed in dry sawdust outside on their summer stands. As I grow older I feel less and less inclined to take two steps where one will do; and my intention now is, this winter and next, to test the matter as to whether there is more work in connection with packing them outside, or carrying them in the cellar and out. If I can winter successfully in or out, the only matter to be settled is which plan entails most work.

I have a good cellar repository which I have used for many years. It is immediately under the kitchen and dining-room portion of the dwelling, and is both dry and frost-proof, and is thoroughly ventilated. It holds, without crowding, about 125 colonies. A few years ago when my stock of bees considerably exceeded that number, I wintered the surplus outside, and the degree of success attained was about the same in both conditions. Of late years, however, as I have been keeping the stock below 100 colonies, I have wintered mostly in the cellar; but now I propose to get onto the easiest plan, whichever that may prove to be. Of course the cellar is there ready without further expense, and the skeleton cases—one for each

colony—will cost something to get up, but once completed, they, too, will be there, for a lifetime.

In wintering outside I used to pack them two, three or four together in dry-goods boxes, with but few of them isolated. I do not, however, like that method, and prefer each colony to have its own case and packing. When they are packed separately the proper temperature of the colony can the more readily be secured, as it is much more difficult when a lot are packed together to get the packing so adjusted in quantity and otherwise as to secure a uniform temperature for all, When each one is by itself these necessary conditions may be compassed with a reasonable degree of accuracy and certainty. This is an important point in outside wintering—of sufficient importance to warrant the extra expense and trouble of separate cases and packing.

The case ought to be large enough to admit of 3 to 4 inches of packing on all sides and in the bottom, with room on top for 6 to 8 inches; and should be so constructed as to exclude all rain and snow and keep the contents dry. The roof or cover should, of course, slant to shed water, and if it fits snugly it ought not to be painted all over. The middle portion of it, say a space 12 by 18 inches, may be left bare on both sides, while the other portions of the cover may be painted. This will facilitate the escape or evaporation of the moisture from within, which will be constantly rising through the dry sawdust.

The entrance of the hive, say one by eight inches, more or less, ought to be left wide open; but the skeleton entrance, while of the same size, ought to be adjustable. Mine, (zinc) may be adapted from a single bee-space to the full hive-entrance. This outside entrance may be adjusted from time to time as may be necessary, while the hive-entrance is left alone—wide open. The outside entrance must be kept clear of ice. The snow alone will not smother, as the air passes freely through it, but sometimes ice will form in the entrance, completely blocking it. This must be looked after. The ice has, however, given no trouble at all this winter so far with me. They appear to be dry and nice and in good form. Those in the cellar are also doing well.

The prospects for the coming season are good. The clover was in good condition in the fall, and the great body of snow now covering it will likely protect it till well along in the spring.—Practical Bee-Keeper. Selby, Ont., Feb. 23.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Bees and Strawberries.—"I want the facts rather than the theories."—Secor.

Friend Secor and I will agree fully in this statement, and I may say that I wrote the former note, not because I wanted to provoke a discussion with Friend S., but to call out the "facts." As a student of Nature, especially of that part of Nature known as the vegetable kingdom, I have learned that one fact is worth a great many theories. Yet theories cannot be ignored, for in their way they play as important a part in the final understanding of the economy of the material world as do what are commonly called facts. I wish to state, before this discussion goes any further, that I do not desire to be understood as claiming that no berries can be produced without bees. Friend Secor is no doubt correct when he says that the wild strawberry vines bore fruit before the bees came, but it is a question in my mind whether they did not receive some aid from other insects. However, the mere production of fruit is not the question, but the *quality* and *quantity* of the fruit.

Friend S. speaks of the practice of strawberry-growers of planting every second or third row with "staminate, or perfect-flowering kinds" to secure a crop. Let me say parenthetically that "perfect-flowering" is not correct when applied to those which bear stamens only. I know that many horticultural writers so use it, but a "perfect flower" is one which produces both of the "essential organs," stamen and pistil. Those which bear only one of these are imperfect, let the missing one be either stamen or pistil.

But to return to the point I was about to make. The rows of vines producing stamens only bear no fruit, of course, and are of no value only as fertilizers. Suppose, where there are no bees, every second row must be given up to the process of fertilization, would it not be some gain, if by the introduction of bees, one row in six would answer the purpose? There would be two more rows to bear fruit. Surely this would be some gain. Then again, if the fruit was more perfectly developed and of finer flavor, this too would be of some gain, would it not?

I remember being at a Farmers' Institute in the strawberry district of southern Missouri, where the people were very loth to hear me talk bees, because, as they said, they were fruit-growers and had no interest in bees. I may be permitted to say, without any risk of exposing myself to the charge of egotism, that before I got through not a few of them were convinced that they had a deal of interest in bees, and they wanted me to go on talking after the time had come to close the meeting, and Friend T. B. Terry and I had to take a train to reach the next appointment. Mr. Terry said in his talk that every second or third row should be given up to the work of pollination, but when I put the question to him as to how this would be if there were plenty of bees in close proximity, the response came promptly that there need not be so many of the staminate variety; that perhaps every five or six rows would do. T. B. Terry ought to be very good authority as to the practical facts, for while he has made his great reputation as a potato-grower, he has no doubt grown as many and as fine strawberries to the square foot as any man in America.

However, let this be as it may, I am confident that all the drift of scientific investigation points to the fact that bees are a material benefit to the grower of strawberries; but in discussing my statements please do not interpret me as claiming that no berries of any kind can be produced without bees.

Did They Freeze?—"They did not starve, but froze to death."—J. A. Bearden, on page 191.

Now, I do not wish to argue the case, but I will have to have further proof than is given in Mr. B.'s letter before I will believe that those bees froze before they starved. I would like to ask one or two questions about them, and I hope Mr. B. will be kind enough to answer them. I am after facts and not arguments to prove a theory, and it makes but little difference to me to-day what I said yesterday—if I find it to be false, I shall let go of it at once. I make it a point to write and speak my best thought to-day with the light I have, even though it may contradict what I said or wrote yesterday.

Was that a strong, healthy colony of bees? Was there plenty of honey *in the combs on which the cluster had formed?* Was this honey *directly above the cluster?* Did you examine the bees to see if their honey-sacs were full or empty? If Mr. B. will briefly answer these questions, he may throw some light on a question of vital importance to all bee-keepers.

Should be Investigated.—"At one place I noticed quite a number of bees, pollen-laden at a creek taking water. They much resembled Carniolans, but were fully one-third larger, and much more hairy."—Thomas B. Blow, in British Bee Journal.

This is an extract from an account of a trip taken by Mr. Blow up the Essequibo River to the mines in the northern part of South America, and in speaking of the bees mentioned, he says, "I am sorry time did not allow me to trace them to their nest." I am sorry, too, for it seems to me here is a very important find. If those bees are a third larger than the Carniolans, and possess any of their good qualities, the bee-keepers of this Continent, if not of the world, are greatly interested in them. I might think there was some mistake about this, did I not know that Mr. Blow has the reputation of being a bee-keeper of no mean scientific attainments, and one whose judgment can be trusted.

Are there not some readers of the American Bee Journal who are in a position to investigate this matter fully? If so, let them speak out at once, as I think we all would be glad to learn more about those bees. If they should prove to be what one might expect from Mr. Blow's remarks, they are of more importance than the much talked of *Apis dorsata.*

Honey as Food and Medicine.—A new and revised edition of this 32-page pamphlet is now issued. It has 5 blank pages on which to write or paste recipes taken from other sources. It is just what its name indicates, and should be liberally distributed among the people everywhere to create a demand for honey. It contains a number of recipes on the use of honey as food and as medicine, besides much other interesting and valuable information. Prices, postpaid, are: Single copy, 5 cts.; 10 copies 35 cts.; 50 for $1.50; 100 for $2.50. Better give them a trial. Send all orders to the Bee Journal office.

The American Bee Journal
ESTABLISHED IN 1861
OLDEST BEE-PAPER IN AMERICA

George W. York, - - Editor.

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Editorial Budget.

Winter Losses of Bees. throughout the country, so far as I can gather from the reports, will not be nearly as bad as I at one time feared, says Gleanings. The heaviest losses seem to be among the careless bee-keepers—those who have a fashion of letting the bees take care of themselves, largely, or among those who, as Mr. Boardman himself says elsewhere, do not take any bee-paper.

Apis Dorsata—the real "giant bees of India"—Mr. Frank Benton writes about in a very interesting article in the April American Bee-Keeper. Mr. Benton has had personal and practical experience with these bees in their native land, and thinks they would prove of great value if introduced into this country. He says: "I know they gather quantities of fine honey and produce excellent wax." He thinks the United States Government should investigate these bees and experiment with them, with a view to their introduction and use in the subtropical portions of our country.

Mr. McEvoy. the well-known foul-brood exterminator of Ontario, Canada, is thus spoken of by the editor of Gleanings:

Foul-Brood Inspector Wm. McEvoy, it appears, has done some pretty thorough work in eradicating foul brood in Ontario. If he continues in office (as we hope he will) the disease will soon be a thing of the past for Canada. Every State on this side should have at least a foul-brood law. While it is improbable that we should be able to get a State appropriation to defray the expense of an inspector, we should have the law, so that it may be used in case of emergency.

Yes, every State should have a foul brood law, and probably if the bee-keepers of each State would organize and work for it they would get it. It is surely worth attempting. The Wisconsin Bee-Keepers' Association, the past winter, has been urging their State Legislature to pass a foul-brood law, but I have not as yet heard the result. Probably it will be known soon.

The Southern Department of the American Bee Journal, beginning with this week, will be in charge of Dr. J. P. H. Brown, of Augusta, Ga., in place of Mrs. Jennie Atchley. The publishers have deemed it best to make this change.

Dr. Brown has contributed largely to the literature of bee-culture, and has answered queries ever since the beginning of that department in the Bee Journal, so his name is quite familiar to all its readers. He is well known in the South, and is fully acquainted with the condition and needs of bee-culture in that portion of our great country. All who desire to ask any questions on bee-keeping in the South, will please send them direct to Dr. Brown, and he will answer them promptly in the "Southern Department" of the American Bee Journal. As you will see by reading his "Salutatory" on page 285, he wishes to begin at once to try to elevate the standard of Southern bee-culture to a higher plane, and invites all who can and will do so, to co-operate with him in the work.

For the benefit of our newer readers, I will give here something personal concerning Dr. Brown. He was born and reared on a farm in Carroll county, Maryland. Like many country boys, he worked in summer and went to a common country school in winter, until he was 16 years old, when he attended an academy in his native town. He afterwards took a course in natural sciences and mathematics at the Western Liberal Institute in Marietta, Ohio. After leaving the Institute, he studied medicine, but mechanism being a ruling passion, he took up dentistry as a medical specialty. He migrated to Georgia in 1859.

Dr. Brown's commencement as a bee-keeper dates back to childhood. His father kept bees in the old box-hives, and his earliest recollections is the cry of "Bees swarming!" and the usual thumping on a tin-pan to settle them. In 1870 he adopted the movable-frame hive, and introduced into his apiary the Italian bee. In 1874 he began to import queens direct from Italy, and to breed them. As a queen-breeder, Dr. Brown has worked for a *better bee;* and to secure this object he has brought to bear all the science, skill and detail that he possesses.

Probably the foregoing will suffice as a more formal introduction of Dr. Brown to the Bee Journal readers. Now get better acquainted with him by writing him as he requests on page 285.

Mr. Christopher Grimm. the prominent bee-keeper at Jefferson, Wis., and well known throughout the country, died at his home on Saturday, April 20, 1895. The American Bee Journal extends to the bereaved family sincerest sympathy in their sorrow. A more extended notice will be given later.

The Beginner in bee-keeping is apt to think that his interests are sadly neglected in most bee-papers these days. But if he will stop to think how very often, in all probability, the rudiments of bee-keeping have been gone over in every bee-paper, he will at once see that it would be utterly impossible, and also almost useless to occupy space with what the majority have read until they are sick and tired of it. Of course, there must be, of necessity, some repetition, but bee-papers are published for the advanced pupils fully as much as for the A B C class.

No beginner in bee-culture should think of going ahead without possessing one or more of the standard books on bee-keeping. This should be read in connection with one or more of the bee-papers. Then, any question arising that cannot be answered by referring either to the book or the paper, should be sent at once to the publisher of one of the periodicals taken on the subject, who will answer it in print, if thought of sufficient general interest. For that very purpose the departments of "Questions and Answers" and the "Question-Box" are sustained in the American Bee Journal.

But no matter if you take a dozen bee-papers, be sure to have one or more of the best text-books on the subject. You will thus have the concentrated experience of experts to compare with your own, and at the same time have the bee-papers to inform you of new and helpful ideas and inventions.

A Correction.—On page 172 I announced the death of Mr. Geo. Neighbour, a bee-supply dealer in England. It was Henry Neighbour who died recently, George having died some 40 years ago. Mr. Henry N. was not a bee-man at all, but his brother Alfred, who also died some years ago, was the bee-keeper and author of an apiarian book. The firm of Geo. Neighbour & Sons is now extinct so far as the Neighbours are concerned. The only relative was a sister who died the same day that Mr. Henry N. passed away.

A B C of Bee-Culture.—We have some of these books left, and in order to close them out quickly, we renew the low offers we made on them. This is the fine cyclopedia of bee-keeping by A. I. Root, containing 400 pages and nearly 200 engravings. The regular price is $1.25, but we will send the American Bee Journal one year and the "A B C" bound in cloth—both for only $1.80; or the parchment cover (very heavy paper) "A B C" and the American Bee Journal one year—both together only $1.50.

Not a Bee Story.—The kangaroo is said to have gotten its name in this way: Captain Cook first discovered the animal in Australia. When he inquired its name of a native the latter replied, "Kan-ga-roo," which, in the Australian language is, "I don't know."

Dr. Miller might say "Kan-ga-roo," for a change.

Among the Bee-Papers

Conducted by "GLEANER."

SACALINE PRONOUNCED A FRAUD.

The Nebraska Queen contains a card from Prof. C. E. Bessey, of the University Experiment Station, denouncing the new plant Sacaline in unqualified terms. He obtained seed from the introducer in France, as also roots. "The seeds made a feeble growth and eventually came to nothing, but the roots grew into strong plants.....Some of the stems were as thick as my little finger, and about as palatable as dry buckwheat straw. The leaves are coarse and unlike anything which stock will eat. I should as soon expect to see an ordinary horse or cow eat dock and sunflowers as this coarse, weedy plant."

WIDTH OF SECTIONS.

B. Taylor having advocated in Gleanings the use of narrower sections, N. D. West, who successfully manages 300 or 400 colonies, makes reply. He tried sections 1⅝ by the thousand side by side with those 1¾ wide. The same weight of honey cost more in sections and foundation, and he could get no more per pound when he sold it. He says: "If I sold the honey in the 1¾ section from the 100 colonies for 10 cents per pound, I should have more money than by using the 1⅝ section, and selling the honey at 11 cents per pound."

ARRANGEMENT FOR WEIGHING HIVES.

Referring to page 229, if L. G. Cash will try the spring balance, he will find he can make a great deal quicker work than with steelyards. One can be had weighing 80 pounds. Those who have cleats on their hives will not need to put four screw-eyes in the corners of the bottom-board. The rope simply passes around the cleat at each end.

PROLIFIC QUEENS—GRANULATED SUGAR—MILLER FEEDER.

Mr. Davenport says on page 231, "The most prolific queens are not the best in many cases." I don't dispute that, but why does he give us no light beyond the bare assertion? Why did he kill that queen that "was prolific and equal to at least 10 frames?"

He says, "When I feed sugar I use the best granulated." What is the "best," and how is it distinguished? Across the sea they object to sugar made from beets and say it is not fit for bees. On this side I think it is generally claimed that beet or cane is all the same. Can we know anything about it, or is there no way of finding out? Is granulated sugar adulterated?

Mr. Davenport uses the Miller feeder. In using it I find difficulty in getting out the bees when I shift it from one hive to another. Will he please tell us how he gets out the bees?

SEALING HEATED HONEY.

Along with the item on page 336, "Keeping extracted honey liquid," it would be well to have the accompanying caution—"A little too much heating will ruin the honey." There are some who like the flavor of cooked honey, but for most tastes cooked honey is spoiled honey. And if honey is heated to be sealed, the heating must be exceedingly slow, and five out of every ten will overheat it.

THE VALUE OF BEE-PAPERS.

"Of all those in my vicinity who have kept bees, and have taken no bee-papers, I cannot think of one who has not failed; while those who have taken a journal have nearly all succeeded. I think this needs no comment."—H. R. Boardman in Gleanings.

DRUGS FOR FOUL BROOD.

Across the sea reports are made from time to time of cures through this or that drug, but on this side the water few will be found to contradict the assertion that drugs are of no use to cure foul brood. F. L. Thompson comes to the defense of drugs in Gleanings, not so much in the way of cure as prevention. The formula is: Carbolic acid 1, salt 3, water 296.

C. J. H. Gravenhorst, an eminent German authority and editor of the German Illustrated Bee Journal, says in Gleanings that he uses "not the refined article you get at the drug store in the shape of white crystals, but black and unrefined carbolic acid, which is interminglied with coal tar, and mostly used as paint. Refined carbolic acid is too strong, and the sanative power of the coal-tar is absent in it.....To guard my bees against infection by foul brood, I take ½ gallon rain water, add to it a teaspoonful of unrefined carbolic acid, and stir it. With a brush, dipped in this solution, I wash the bottom-boards every spring, after the first cleansing flight."

HOG SCENT TO PREVENT STINGS.

In Gleanings, Rambler reports W. M. Cole as saying: "If you get the scent of a hog on your hands or clothing, it is the best of preventives to bee-stings. Smokers! wouldn't have one around. Just step over into the pen and rub your hands on the old sow's back, and you will have apifuge enough to last half a day."

It would also be economy of food to leave your hands unwashed when you came to dinner.

UPWARD VENTILATION WITH A VENGEANCE.

Thaddeus Smith relates in Gleanings that in Kentucky he found a box-hive in March that had lain all winter upside down with no covering on the combs, it having been supposed that the bees were all dead. To his surprise he found live bees in it, although in December the thermometer was down to 14° below zero, and in February 18° below, and either down to zero or below every day for three weeks in February.

MEASURING BEES' TONGUES.

Jake Smith's boy Zed, as reported in Gleanings, has been getting up an arrangement to measure bees' tongues. But he's hardly original in this, for across the ocean two or three different glossometers have been invented, and the matter is taken very seriously. Why shouldn't it be? If the same pains that have been taken to breed stripes had been taken to breed from the colonies in the apiary showing the longest tongues, we might now have bees that would readily work on red clover. At least it looks that way.

GETTING THE NEIGHBORS TO PROVIDE PASTURE FOR YOU.

Says S. E. Miller in Progressive: "Show them that you can make more cash per acre out of Alsike clover than they can out of the common red. By this means you will soon have them coming to you for Alsike seed, and in a short time you may have acres of it within easy reach of your bees."

CONDEMNING WITHOUT TRIAL.

"Observer," in Progressive Bee-Keeper, comes down on Heddon for being down on the Higginsville cover, saying it is hardly the fair thing to condemn before trial; and then three paragraphs further on Observer does the very same thing by saying, of Aspinwall's wooden comb to prevent swarming, "It won't work;" although he gives no intimation he has ever tried it.

Say, Observer, I wouldn't have told on you if you hadn't threatened in Progressive to gag me.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

Salutatory.

In taking charge of the "Southern Department" of the American Bee Journal I know that I am assuming a great responsibility—a real weight; but if my Southern bee-keeping friends will come to my assistance, this weight will, in a great measure, be lessened; and in place thereof there will be a pleasure and a satisfaction in performing the duties pertaining to this department.

Knowledge of anything is but the stem of experience. All that we know about bee-keeping is but the experience of our predecessors added to our own research and observation. Hence it seems to me that, being indebted to others for a large part of our knowledge pertaining to the honey-bee and to its management, we should endeavor to pay at least a part of this debt by giving the gist of our experience to others. This department of the Bee Journal has been established for this object. Let your light shine so some brother now groping in the dark among his bees may be lifted up to the plane of intelligent bee-keeping. Your torch will be none the less for lighting that of your neighbor.

Now, my friends, I hope you will favor me with your

questions, your bits of experience, your way of conducting your manipulations, your reports of successes and of failures. The latter reports are really the most valuable to a beginner; for when we report our failure, and the probable way it was brought about, some brother who is just about launching his apiarian bark may avoid the Charybdis we encountered.

I am aware that it is much more agreeable to speak of our successes than of our mistakes. In fact, this desire seems to be so strongly planted in some persons that, to hear them talk, they never make mistakes—never have any failures in anything they undertake. They may state facts as George Washington did once after trying the edge of his little hatchet on his father's cherry-tree and when he looked his "*dad*" straight in the eye.

Failures and losses are liable to occur in any business. Bee-keeping is no exception. We must bring pluck and energy in bee-keeping as are required in any other business. Rightly conducted, bee-keeping will pay you now, in these stringent times, better in proportion to the capital invested than anything you can raise on your farm. But no one can expect success without knowledge, and right here the "Southern Department" of the American Bee Journal will come to your aid. It is my aim to make this department of interest and benefit to you. Dot down your questions and thoughts, and send them along. Do not let national questions, politics, the wily tricks of public pap-sucking demagogues, financial depression, the low price of produce, lead you away from the task of throwing around your home love, unity, industry, energy, fruits, bees, flowers. With the fact that revolutions don't go backward, you may sing with the poet:—

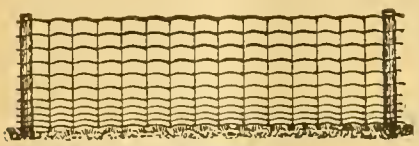
"The night is mother of the day,
The winter of the spring,
And ever upon old decay
The greenest mosses cling.
Behind the cloud the starlight lurks:
Through showers the sunbeams fall;
For God, who loveth all his works,
Has left His hope with all."

Augusta, Ga. J. P. H. BROWN.

Basswood in the South.

Basswood seems to prefer a cool, moist atmosphere, and for this reason it is only found to a limited extent in the South. In fact, it is rarely found south of the latitude of Augusta, Ga., and then only on low land. In 1870 I planted quite a number of basswood trees on upland, soil sandy, and to-day they are still there, but have made no progress as to growth. The European variety has been planted in a few places, and it thrives and does much better than the common American basswood. The bloom is the same, and bees swarm on it.

Basswood here is liable to be attacked by a beetle that, after depositing its eggs in an incision which it makes in a young branch, proceeds to saw around the limb and cuts it off as smoothly as if done with a knife. This is done by the cunning instinct of the insect, so that the larvæ, when hatched, may easily crawl down into the ground.



GO AWAY FROM HOME TO HEAR THE NEWS.

Last fall a wealthy New Yorker gave one of our salesmen an order for several miles of our park fence for his game preserve in the Adirondacks. When asked how he came to do this without having seen the fence, he replied: "I met my friend Rutherford Stuyvesant in Europe and asked what fence he used on 'Tranquility Stock Farms' in New Jersey. He answered 'Page Woven Wire exclusively' and assured me it was all the Co. claimed for it. The Adirondack fence stretched on trees, proved so satisfactory that the owner wants 18 miles more.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

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15A8 *Mention the American Bee Journal.*

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W. H. PUTNAM,

16A4t RIVER FALLS, Pierce Co., WIS.

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The Adels—A New Strain of Bees

Friends, I shall be prepared to fill orders for **Adel** and **Italian Queens** June 1. Try them Warranted, $1; Tested, $1.50; Select Tes., $2.

17A **Joseph Erway, Havana, N. Y.**

STILL IN THE LEAD.

BILTON'S Chaff Hives, T-Supers, White Polished Sections, Foundation, Smokers, and everything needed in the Apiary.

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11A13 *Mention the American Bee Journal.*

General Items.

Self-Spacing Tacks for Frames.

While making a business trip through the county in the spring of 1893, I run across a bee-keeper who had adopted the simplest and at the same time the most effective method of self-spacing that I have yet seen, either in print or out of it. He had simply driven an upholstering brass-headed tack in each side of the frame just outside the end-bar, so that when the frames are hung in the hive, the heads of the tacks meet, leaving the frames ⅜ inch apart, making the building of straight combs a certainty, with absolutely no brace or burr combs—at least so it appeared to be in Mr. Smith's apiary, and so it has been with me the two seasons in which I have used the spacing tacks. The hives in which I put new frames in 1893—the tops of the frames are almost as clean as when put into the hives, while the dovetailed hive with V-edge Hoffman frames had all considerable brace and more or less burr combs. Furthermore, I can manipulate the brood-nest in two hives with spacing tacks, in the same time and without exciting the bees nearly as much as in one with the V-edge frame. Perhaps this device is already generally known, but if so I am surprised that we have not seen it mentioned in all the controversies about frames, as it combines the advantage of fixed spacing and loose frames with entire absence of burr and brace combs.

Au Sable, Mich. J. M. MOORE.

Late-Reared Queens—Size of Hives.

I read in a late number of the Bee Journal, with much interest, the article on late-bred queens, or queens reared in the spring of the year. My experience with queens reared late in the fall is that they are better for the next spring, as when they begin to lay they never slack up, as long as there is room in the hive. They will be stronger colonies when the honey harvest comes, gather more honey, and are not nearly so apt to swarm. Of course it is considerably more trouble to rear good queens late in the fall, but if the colony is fixed as it should be, I think one can get fully as good queens as those reared in the forepart of the summer. I think if I have as good success with late fall reared queens as I have had thus far, I will rear all my queens as late as possible.

I had two colonies last year that had queens reared the last of October, and they

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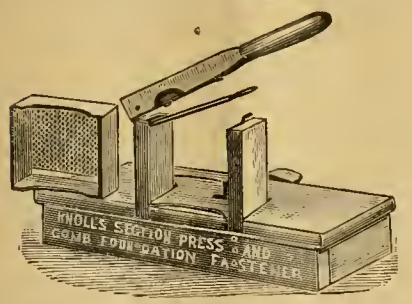

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11A10 *Mention the American Bee Journal.*

did not lay an egg until last spring, that I know of, but when spring came they both out-stripped anything in the yard, and they also stored more surplus honey than the rest.

I should like to know if Dr. Miller is on the fence yet regarding 8 or 10 frame hives. I am using 8-frame hives, but am more and more inclined to think they are too small for any average good queen, as they will very seldom lay in more than six, even if they could fill ten frames. I have taken an empty hive filled with empty combs, and placed on top of such colonies, and they would at once go up and fill from four to six frames there, and keep the six frames below full just the same, so I think an 8-frame hive is better for extracted honey than for comb honey, as one can then give the queen plenty of laying room above, but this cannot be done when one is after the nice filled sections.

Bees had several good cleansing flights the last of February. I have lost only one colony out of 25 so far. G. E. NELSON.

Bishop Hill, Ill., March 4.

Bee-Keeping in New Mexico.

On page 127, I see Matthias Wechsler, of Sterling, Ill., wishes to know how the bees have fared in this part of the country. I have been making some experiments which might be of some value to the fraternity, although they may seem quite novel to many.

I put 45 colonies in a shed, single boards covering the sides, top and end, leaving the east end open. The average weight of the hives was 90 pounds when put in, and on Feb. 28, when put out, 70 pounds. Thirty-three colonies set over a hole in the ground—a kind of an air-chamber, averaged 85 pounds when put in, raised to their summer stands yesterday, they averaged 60 pounds. Twenty-six colonies left on the summer stands averaged, last fall, 87 pounds; two dead, and the others averaged 65 pounds yesterday. The shed-covered bees seem to have fared best, and those in the ground the most unsatisfactory.

The winter here has been much cooler, and more rain and snow than any former since I have lived here (7 years). I have the three to five banded Italians—good enough honey-gatherers for any one. No other kind of bees within 50 miles of me that I know of.

My motto is, plenty of honey in the brood-chamber, and keep everything dry as possible. Then the loss is only by accident. My covers are not so close-fitting as to leave no air-passage. The covering on top of the frames is calico dipped in hot wax.

There has never been a case of foul brood in this county, neither paralysis, that I have heard of. Should any one want to know about anything in this district I will be pleased to answer if they enclose stamps.

W. S. MITCHELL.

Farmington, New Mex., March 1.

A Humiliating Confession.

"Will swarms of bees accept old hives?"

I tried to solve this problem myself, and, too, at a great expense and loss of bees. For the last several years I made all sorts of experiments to retain new swarms in old bee-hives, but without success, strictly speaking. I suppose I lost more than 50 swarms in fooling with this experiment. Last year I conceived the bright idea (on a plausible theory) to clean thoroughly the hives with salt-water for their reception. I placed three swarms in old saline hives thus prepared. They appeared to accept them. I was so elated with my success that I rushed at once into print to announce my discovery. I thought to utilize old hives would be the saving of many thousand of dollars to the bee-fraternity. Somehow I take pleasure in seeing others prosper, and to effect anything of the kind adds wonderfully to my own private egotism—that is, to be proud of myself. For it is not everybody that has the means to work much good for the multitude; but to mislead the multitude is simply awful.

About the time my great discovery (?) was announced in the American Bee Journal, about a year ago, I made an examination of the three hives in question; but, to my horror and chagrin, found not a bee in them! I did not care a straw about the loss of the bees, but unwittingly to give the world a report that may mislead others humiliated me to the lowest depth of humiliation, and, I will add, shame.

Therefore, I write this in order, if possible, not to mislead any one with my premature report on how to have swarms of bees accept old hives. However, these fatal experiments gave me some wonderful ideas of the physiological function of the olfactories of the bees; but somehow my last report took all the starch out of my bee-lore, so that I cannot venture again until I get over my flabbiness.

Austin, Tex. G. P. HACHENBERO, M. D.

Dividing to Prevent Swarming.

There is a good deal said in the bee-papers about dividing colonies to prevent swarming, so that each colony will do well. The best way I have tried is to rear my own queens, then when colonies get strong, say about the last of May, I take an empty hive and place it on a new location; then go to a colony, open its hive and take out a frame of brood, bees and all, being careful that the queen is not on the frame, which I put in the new hive, and give an empty comb to the old colony, and close up its hive.

Now go to another colony, open its hive and take out a frame the same as before, always leaving the queen in the old hive; and so on till you have eight frames in the new hive, then close up the new hive and give them a queen, and your work is done.

In this way the new colony is just as strong as any in the yard, and will work right on like the rest. When they get stronger than necessary, I would make some more colonies in the same way. This will prevent swarming, and keeps them strong, so that they will store more honey.

Collingwood, Ind. M. J. KISTLER.

Bro. Ben at the Camp-Fire.

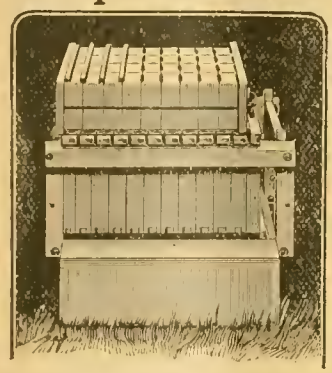
Being aware of the fact that a bee-journal is not the proper place to discuss a historical question, I will reply only briefly to Mr. Kelly's article. (See page 152, Vol. XXXIV, No. 5.) Genesis II, 9 to 16, refers to Adam and Eve before they were driven from the Garden of Eden. My article referred to their after life, and so Mr. K.'s quotation will not apply.

In the "Pictorial History of the World," by James D. McCabe, this sentence is found on page 35: "Noah, his wife, and his three sons, Shem, Ham, and Japheth, then resumed the cultivation of the earth."

The Southern farmers during the last two years of the War, consisted of women, children, old, broken darkeys, and very aged men. Rather a sorry crew to capture one of Uncle Sam's trains, I imagine. High prices have nothing to do with the source of supply. You must not forget that there was a vast city population, as well as the Southern army to supply, and also that every avenue of commerce was blockaded by Uncle Sam's gun-boats, torpedoes, and forts. If you will read Grant's order to Phil Sheridan, on page 275 of "Swinton's Condensed History;" also Sherman's reason for destroying Georgia, on page 277 of the same work, you will find the source of Lee's supply. And it would be folly to say that the farmers could supply Lee's army, and yet be unable to supply their own wants.

By living largely on fruits, and being my own doctor, the pills and bills do not materialize. Being only one of the would-be bee-keepers, I cannot say how well fixed they are. I have enough, however, to be quite comfortable. I have no more use for the pipe than for your "spirits fermenti," but good tobacco, used as a poultice, will relieve bee-stings or snake-bites in a short

The Aspinwall Hive!!



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time. But "mother earth," thoroughly wet with water, is what I use for all kinds of poisons, where a poultice is to be used.

A brother of mine was once bitten by a rattle snake. He was given whisky, which made him drunk. When he came to, he was swollen to an enormous size, was blind, and spotted as the snake. He then crawled to the pig-wallow, and backed in to his waist, and in 15 hours came out sound and well. I have known this tried in many cases, and never a failure; and it will cure every time, I think.

One swarm of my bees are dormant, or dead; the others in good condition. Owing to severe drouth we averaged only 20 pounds per colony of surplus honey last year.

Try stopping the robber-bees by using a large dry-goods box over the afflicted colony. Bore a small auger hole in front of the entrance; leave as much space as you can in front of the hive. The box must be tight only at this hole. Put it over the hive at night.

Try uniting by putting one colony over the other with wire-screen between, using lath on the sides and one end, leaving one entrance directly over the other, and take the screen out in about one week.

I expect to make a double-glass hive of small window sash, and make the frames the size of the Hoffman, only setting them up endwise in the hive. This will give narrow, deep frames. I also wish to try one with two sides glass and two of lumber, to see what effect it will have on robber bees.

I stopped the ants working in one hive by putting the bench legs in cans of water, and the hive on the bench. BRO. BEN.

Grant Centre, Iowa.

No Winter Losses.

Been seem to be doing well. We had no winter losses. J. S. WORLEY.

Isom, Tenn., April 1.

Wintered Without Loss.

My bees wintered without loss. I have 42 colonies all uniformly strong. They did well last summer. One colony gathered 105 pounds of surplus boney.

Lakeville, Ind., April 9. JACOB KRON.

What's the Cause?

Bees are working on fruit-blossoms now. I had four colonies last fall, and lost one the past winter. They did not swarm much the past two seasons. A neighbor of mine only one-fourth mile distant, has not had any honey the past two years, while I have had a fair crop. Treatment about the same. What's the cause?

O. SEGESSEMANN.

Amazonia, Mo., April 15.

Season of 1894—Wintering.

Last spring I started with seven colonies of bees, two of which were very light, and the others in fair condition. I took the queen from the best colony, and some frames of brood and bees from some of the other ones, and made a new colony. They commenced to build queen-cells, and I reared six nice queens. I took them and divided up my bees, and commenced to rear some more queens. I kept this up till in July, and when I got through I had 38 good colonies, which I put into the cellar in good condition last fall. My bees stored over 300 pounds of honey per colony, spring count.

One of my neighbor bee-keepers said to me: "Your bees must be light." I said, "I think not; just lift a hive." And so he did, and said, "They have enough to keep four colonies; they will average in weight from 75 to 100 pounds per colony."

I put them into the cellar early in the fall—about Nov. 1. I took two 2x4 scantling, put them on edge on the cellar floor, far enough apart to set the hives on. Then I took the hive bottoms and tops off, and set

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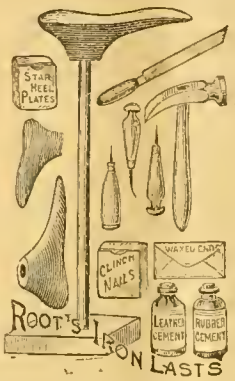

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GEORGE W. YORK & CO.,
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Convention Notices.

MINNESOTA.—The regular semi-annual meeting of the Southern Minnesota Bee-Keepers' Association will be held on the first Monday in May, 1895, at LaCrescent, Minn. All bee-keepers invited. E. C. CORNWELL, Sec.

Winona, Minn.

ILLINOIS.—The spring meeting of the Northern Illinois Bee-Keepers' Association will be held at the residence of H. W. Lee, in Pecatonica, May 21, 1895. It will be held one week later if it is a stormy day.

New Milford, Ill. B. KENNEDY, Sec.

CONNECTICUT.—The fourth annual meeting of the Connecticut Bee-Keepers' Association will be held at the Capitol, at Hartford, Wednesday, May 8, 1895, commencing at 10:30 a.m. All interested are invited.

Waterbury, Conn. MRS. W. E. RILEY, Sec.

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Please mention the Bee Journal. Nov15

Binders for this size of the American Bee Journal we can furnish for 75 cents each, postpaid; or we will club it with the Bee Journal for a year—both for $1.60. We have a few of the old size (6x9) Binders left, that we will mail for only 40 cents each, to close them out.

the hives on the scantling just far enough apart to let the edge of the top tier rest on the edge of the lower one, and piled them up in this way—no bottoms on, and just the cloth over the brood-frames. My cellar ventilator is 4x6 inches. The mercury has been at from 40 to 45 degrees, and the bees are in the very best of condition.

I think that is a very good increase for a beginner. I have kept bees three years.

The weather has been very cold here this winter. When I put the bees in last fall I put some honey in a tea-saucer and sprinkled strychnine over the top of it. Another good way is to take cheese and cut it ½ inch thick, sprinkle strychnine over it, lay it on a brown paper, two or three double, and lay in the oven for a few minutes; the strychuine will melt into the cheese, and this is a very good dose for the mice. This wants to be put around on the cellar bottom, or under the hives. The mice will always take it first.

I would like Dr. Miller's opinion of the top ventilation of my hives in the cellar. There is just the cloth I have over the super and brood-frames, over the bees. I take the top story off.

My bees are doing nicely. The ventilator is in the top of the cellar, and no air can get in any other way. A great many think that there should be some absorbent over the bees, but I don't see any need of it. This is an experiment with me.

FRANK COLE.

Mecosta, Mich., March 12.

Lost Only One Colony.

I have 50 colonies, wintered on the summer stands in 8-frame dovetailed hive, with super filled with chaff on top. I lost but one colony; all the rest seem strong and in fine condition. I have been giving them flour to work at the past two weeks, and to-day they are carrying in the first pollen from willow. I have been in the business 25 years. D. COMPTON.

Troy, Pa., April 20.

"Migratory Bee-Keeping" Questions.

I noticed an article on page 135, on "Another Kind of Migratory Bee-Keeping," by John McArthur. It was read with much interest. I have given this subject much thought, but would like to ask a few questions:

1. Would it pay to ship bees to the Northern States after May 15?
2. Should the bees be furnished with water while shipping?
3. Would it pay to ship bees from the North here to winter and gather the white honey-flow in the spring, and then ship them North?

My place is 130 miles west of Savannah, Ga., on the S. F. & W. railroad. I have 300 colonies, spring count. My white honey-flow is over by May 18, and then the hives are full of bees and brood, and very little to do afterwards. If any one wishes to try the experiment. I could furnish 100 colonies or more. I solicit correspondence.

Du Pont, Ga., April 1. BEE DUNCAN.

Buffalo Co., Nebr., Convention, Etc.

As the weather was too unfavorable for our previous meeting, and not enough being present, we called a special meeting for Saturday, March 9. The purpose of the meeting was to make suggestions to the Agricultural Society of Buffalo County, Nebr., regarding premiums at our next county fair.

The bee-association submitted the following for their approval:

For the best one frame of bees with queen and brood, in observatory hive, 1st. $5.00; 2nd, $2.00.

For the best comb honey, not less than 5 pounds, in single-comb sections, weighing not more than one pound each, 1st, $5.00; 2nd, $2.00.

For the best extracted honey, not less than 5 pounds, put in one-pound jars, 1st, $5.00; 2nd, $2.00.

For the best hive, made in Buffalo County, 1st. $3.00; 2nd, $1.00.

For the best and largest general display or exhibit of bees, honey and apiarian appliances, 1st. $10.00; 2nd, $5.00.

No exhibitor of any other county to be allowed to compete.

To-day the above suggestions and propositions were presented to the Agricultural Society, and after a little discussion it was unanimously adopted, with the amendment that only the counties joining Buffalo County are allowed to compete.

So now you can see that we bee-keepers have a little inducement offered to work. The Agricultural Society think they are making us a great big offer, but as we are just starting they think they will help our cause along.

By all appearance, and if we can believe what every one predicts, we are going to have the biggest crops of everything, that ever was seen in Nebraska. Of course that includes honey, too. And if I keep my health, I'll promise that there will be the largest exhibition of honey, bees and apiarian appliances that ever was seen in any fair ever held in Buffalo County, Nebr.

I am experimenting with the Wagner flat pea (Lathyrus silvestris Wagneri), and with sacaline—the new forage and honey-producing plants. I sowed the seed in boxes in the house. The former are doing very well—every seed is germinating; but the latter is doing very poorly. I think the seed is not good or fresh. When the weather is warm enough I will plant them in the field, and then let the Bee Journal readers know about them.

From what I can learn so far, nearly every bee-keeper had some losses of bees the past winter, except myself.

J. C. KNOLL, *Sec.*

Glenwood, Nebr., March 16.

Promises to be a Good Season.

My bees are in very good condition. I lost only one colony during the past winter. The season promises to be a very good one for honey. P. O. COUVILLON.

Carencro, La., April 19.

An Old Soldier Bee-Keeper.

The Bee Journal is very entertaining and instructive. I am an old soldier, 54 years old, and have partially lost the use of one hand. I have 55 colonies of bees a few miles out from the city. It comes mighty handy to pick up a few dollars from the bees and honey. I don't believe I am so "struck" on bees as to call them "pets," if it wasn't for the money to be got out of them. L. PATTERSON.

Denver, Colo., April 17.

Working on Maple and Elm.

Bees have come through the winter all right. I lost 2 colonies out of 61. They are working very nicely on maple and elm. My hives are very strong with bees. I have never had a colony of bees affected with any disease, and guarantee them free from all disease. MRS. A. A. SIMPSON.

Swarts, Pa., April 20.

Protection Needed in Winter.

Winter is over at last, and balmy Spring, clothed in all her regal splendor, is with us once more. The bees now "improve each shining hour," collecting the precious nectar from every opening flower. Bees that were in thin-walled hives, and unprotected, came through very weak in numbers, while those in straw hives, or otherwise protected on the stands, are in better condition. I am still firm in the belief that protection of some kind is essential in this latitude, Mr. Abbott to the contrary, notwithstanding.

W. J. CULLINAN.

Quincy, Ill., April 20.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Apr. 18.—The supply of comb honey is very light and looks as though all would be sold, unless it be some California that is being spread upon the street. Best white comb brings 14c.; dark, 8@10c. Extracted, 5½@7c., according to quality, body, flavor and package.

Beeswax, 28@30c. R. A. B. & Co.

KANSAS CITY, MO., Apr. 18.—The demand for comb honey is light, and good for extracted. We quote: No. 1 white comb, 1-lb, 14c.; No. 2, 12@13c.; No. 1. amber, 11@12c.; No. 2, 8@10c. Extracted, 5@6½c.

Beeswax, 22@25c. C. C. C. & Co.

CINCINNATI, O., Apr. 19.—Demand is quiet for all kinds of honey, with a fair supply. We quote: Best white comb, 12@14c. Extracted 4@7c., according to quality.

Beeswax is in good demand at 25@31c. for good to choice yellow. C. F. M. & S.

CHICAGO, ILL., Mar. 18.—Demand is good for all grades of honey excepting dark comb. We quote: Fancy comb, 15c.; No. 1, 14c. Extracted, 5@6½c. J. A. L.

PHILADELPHIA, PA., Apr. 1. — Choice white clover honey is getting very scarce at 14c. Dark and poorly filled sections, 8@10c. Demand is falling off on extracted, prices ranging from 4½@7c. Strictly pure white clover very scarce at 10c. Beeswax arriving more freely and selling at 30@31c. W. A. S.

NEW YORK, N. Y., Feb. 20.—We are gradually working down our stock of comb honey, and the indications are that we will succeed in disposing of all of the white honey and possibly all of the dark during the spring, at following quotations: Fancy white, 1-lbs., 12c.; fair, 10c.; buckwheat, 8@9c. The market is well supplied with extracted honey. Demand is fair for choice grades, while common stock is neglected. We quote: White clover and basswood, 5½@6c.; buckwheat, 5@5½c; Southern, 45@55c. per gallon, according to quality. Beeswax firm and in good demand at 30@31c. H. B. & S.

BUFFALO, N. Y., Mar. 16.—The honey market is getting quite well cleaned up here. We quote: Fancy, 13@14c.; choice, 11@12c.; buckwheat and commoner grades, 7@8c. Extracted is in very light demand here, and we would not advise shipments. B. & CO.

SHIP Your Butter, Eggs, Poultry, Veal, Beans, Potatoes, Hides, Pelts, Wool, Hay, Grain, Green and Dried Fruits, or ANYTHING YOU MAY HAVE to us. Quick sales at the highest market price and prompt returns made. Write for prices or any information you may want.

SUMMERS, MORRISON & CO., Commission Merchants, 174 South Water St., Chicago, Ill.

REFERENCE—Metropolitan National Bank, Chicago.

6A13t Please mention the Bee Journal.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

J. A. LAMON, 43 South Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 28 & 30 West Broadway.
CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.

Kansas City, Mo.

C. C. CLEMOMS & CO., 423 Walnut St.

Buffalo, N. Y.

BATTERSON & CO., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

Philadelphia, Pa.

WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 p.; illustrated. 25c.

Doctor's Hints

By DR. PEIRO, Chicago, Ill.
100 State Street.

Follies About Tomatoes.

Another exploded folly is that tomatoes cause cancers. When or where the absurd idea originated is immaterial, but the fallacy should be deprecated. A more sentimental idea prevailed, a hundred years ago, that eating of this fruit was a sure encouragement to the tender passions, hence its ancient name, "Love apple."

An Elegant Tooth-Powder.

Tooth-powder made of equal parts of pulverized cuttle-fish bone and chalk with a teaspoonful of powdered orris-root and myrrh, makes an elegant preparation for the teeth, and should be used, with a brush, at least morning and night.

Liniment for Cuts and Bruises.

A handful of marigold blossoms into a bottle and covered with equal parts of alcohol and water, letting it soak for a week or two, makes a fine liniment for just such cuts and bruises as girls and boys are apt to get. Wet a linen cloth and bind it on. It's great!

A Suffering Wife.

DR. PEIRO:—My wife, 30 years old, has been a sufferer from dyspepsia and heart disease for five or six years; got it when she had diphtheria. Spits blood when she has an attack, about once in three months, perhaps. Was very seasick when coming over from New York lately, but felt much better since. Do you think it is curable? and what should she do about it? Please reply through the Bee Journal.

A. S. ROSENROLL.

Aigle, Switzerland, March 23.

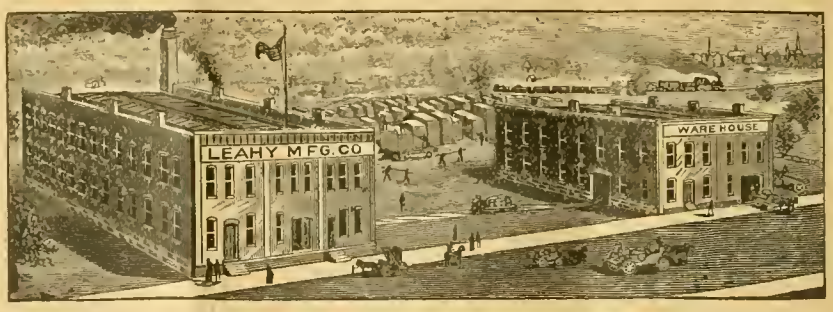
Much as I wish I could afford Mons. A. S. Rosenroll the practical information he requests. I regret the impracticability of doing so. Cases of the nature suggested are of sufficient importance to demand a careful investigation before a line of treatment can be safely decided on. Life is too precious to hazard on insufficient consideration. Perhaps a more detailed statement of Mrs. R.'s past and present condition might enable me to give a reliable opinion.

The "Golden" Feeder.—Letters patent have been applied for to protect my rights, which shall not interfere with my donating the right to bee-keepers, to make for their own use. I am trying to keep up with the orders for photographs, with printed instructions pasted on the back, how to make them, for 25 cents. Don't send stamps—a quarter will come all right.

J. A. GOLDEN.

Reinersville, Ohio, April 25, 1895.

Knoll's Combined Press and Fastener, advertised in another column this week, is a great time-saver, and any one can work it by following the directions which accompany each machine. Its capacity is from 100 to 500 sections an hour, and it will fasten full size sheets of foundation as well as starters—one as fast as the other without making any changes of the Press. It is sent by mail for only $1.90. Address, J. C. Knoll, Glenwood, Nebr.



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I will pay the Freight on Cash Orders of $20 or over at Catalogue rates, if within 300 miles of Chicago.

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of **Bee-Keepers' Supplies FREE.**

Thos. G. Newman, 147 South Western Ave. CHICAGO, ILL.

California

If you care to know of its Fruits, Flowers, Climate or Resources, send for a Sample Copy of California's Favorite Paper—

The Pacific Rural Press

The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.40 per annum. Sample Copy Free.

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Beeswax wanted at all times. I pay the highest price, and sell Foundation at a low margin. Send for Samples and Prices, to—

GUS DITTMER, AUGUSTA, WIS.
Reference—Augusta Bank. 16Atf

APIARIAN SUPPLIES VERY CHEAP —"Amateur Bee-Keeper"—how to manage bees, etc.—25 cts. The "Model Coop." for hen and her brood Wyandotte, Langsban and Leghorn Eggs for hatching. Cat. free, but state what you want

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GOOD GOODS are always in demand.

LOW PRICES are appreciated in these times.

PROMPT SERVICE is a necessity to business.

We Combine All Three.

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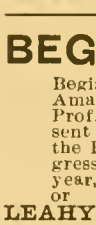
G. B. LEWIS CO., Watertown, Wis.

☞ Be sure to mention the American Bee Journal when you write. ☜

PATENT WIRED COMB FOUNDATION
Has No Sag In Brood-Frames



Thin Flat-Bottom Foundation
Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook Montgomery Co., N. Y.

BEGINNERS.

Beginners should have a copy of the Amateur Bee-Keeper, a 70-page book by Prof. J. W. Rouse. Price 25 cents; if sent by mail, 28c. The little book and the Progressive Bee-Keeper (a live, progressive 28-page monthly journal) one year, 65c. Address any first-class dealer, or

LEAHY MFG. CO., Higginsville, Mo.

THE PLACE

To get your **QUEENS and BEES.** Untested Queens—Carniolans, 3-Bands and 5-Bands—$1.00 each; 6 for $5.00; or $9.00 per dozen. Tested—3-Bands, $1.50; 5-Bands, $2.50 each; Carniolans, $2.00 each. FINE Breeders, either race, $5.00 each. Bees by the Pound, $1.00; 10 or more, 90c. each. Nuclei, $1.00 a Frame; 10 frames, 90c.—made to suit any hive. You can have any of the Queens, as above, at their price extra to go with Nuclei.

Send for Free Catalogue that tells all about Queen-Rearing. Also ask for a sample copy of the new bee-journal, first issue out May the 1st. We are determined to give you a journal second to none, and at the end of a year if you are not well paid for the $1.00 I will gladly return your money. Look for something rare and interesting in "The Southland Queen."

A Bee-Hive Factory running every day.

THE JENNIE ATCHLEY CO.
18Atf BEEVILLE, Bee Co., TEXAS.

WOVEN WIRE FENCE

Horse high, bull strong, pig and chicken tight. Make it yourself for **13 to 20** cents a Rod. 50 styles. A man and boy can make 40 to 60 rods a day. catalog free.

KITSELMAN BROS., Ridgeville, Ind.

10E5 Please mention the Bee Journal.

Hunt's Foundation

Led all others in the Government experiments It exceeded the Given by 6½ %, and all the rest by 24½. See Sept. Review, 1894. The Largest, Most Comprehensive Catalog of everything needed in the Apiary, FREE. Cash for Beeswax, or will make it up in any quantity. **M. H. HUNT, Bell Branch, Mich.**

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ALL STEEL OR WOOD STEEL LINED.
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162 Mass. Ave. INDIANAPOLIS, IND.

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Are Queens Balled in the Fall When Feeding After Laying Has Stopped?

Query 969.—I have seen it stated that queens are likely to be balled and killed by feeding in the fall after laying has stopped. What has been your experience in that direction?—Indiana.

Chas. Dadant & Son—We never saw this.

J. A. Green—I have never known it to happen.

Jas. A. Stone—I have never had it to happen.

W. G. Larrabee—I have had no experience.

Mrs. L. Harrison—I never lost them in that way.

C. H. Dibbern—I know nothing about it. No experience.

Mrs. J. N. Heater—I have never had any trouble in that way.

H. D. Cutting—I don't remember losing any queens in that way.

B. Taylor—I have never known any facts to prove this idea to be true.

Wm. M. Barnum—Your informant was evidently inclined to be facetious!

R. L. Taylor—I have fed a great deal in the fall, and never saw anything of that.

P. H. Elwood—With a large experience, I have observed nothing of the kind.

G. M. Doolittle—I never had such a case, and have often fed for winter stores.

E. France—I have fed in the fall, but don't know that I ever had queens lost in that way.

Prof. A. J. Cook—I do not think it is so. I have fed many a time and never had such results.

Dr. C. C. Miller—I have never observed anything of the kind, and yet I couldn't be sure there's nothing in it.

Rev. Emerson T. Abbott—I never had any experience in that line, and do not think it has any foundation in fact.

Eugene Secor—Haven't any. But if I were to *guess* the cause of the balling, I would say the feeding attracted robbers.

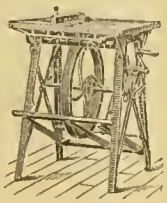
Dr. J. P. H. Brown—I have had hundreds of queens balled, but never recollect having one balled under the circumstances you state.

Rev. M. Mahin—I have never had a case of the kind. I have had queens balled by handling the combs in cool weather in the spring.

J. E. Pond—I have never known such an instance, but have frequently found them balled after opening and examining the condition of a colony.

G. W. Demaree—I have never experienced any trouble of that kind when feeding in the fall. I only feed a few colonies at a time, and avoid the danger of *stealthy* robbing. When a great many colonies are fed at the same time, they assume the same *scent* or *smell*, if you please, and sly robbing may be started, resulting in the "balling" of some of the queens. I have had cases of this kind in early spring.

Barnes' Foot-Power Machinery.



Read what J. I. PARENT, of CHARLTON, N. Y., says—"We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will. Catalogue and Price-List Free. Address, W. F. & JOHN BARNES, No. 995 Ruby St., Rockford, Ill.

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DO NOT ORDER UNTIL YOU HAVE WRITTEN US FOR PRICES ON

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Also D. T. Hives, Shipping-Crates and Other Supplies.

We have completed a large addition to our Factory, which doubles our floor room; we are therefore in better shape than ever to fill orders on short notice. **Send for Price-List**

J. FORNCROOK,
WATERTOWN, Jeff. Co., Wis., Jan. 1st, 1894.
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Interesting Monthly for
The Family and Fireside
Welcome in every Home.
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Large Premiums for Clubs.
Sample Copy sent Free.
—o—
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CHICAGO, - - ILLS.

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I will send a Guaranteed 5-Banded Yellow Queen, bred from a Breeder selected from 1000 Queens (some producing over 400 lbs. of honey to the colony); or a 3-Banded Italian Leather-Colored Queen direct from a Breeder imported from Italy. Oct. '94—**at 75c.,** and a special low price for a quantity.

My secret is to sell an extra-large amount, which enables me to sell at low prices. Will run this spring 350 Nuclei—have 1 home and 4 out apiaries. **Booking Orders Now**—will begin shipping about May 1st. No Queens superior to my Strain.

☞ Send for Descriptive Catalogue and Testimonials, to
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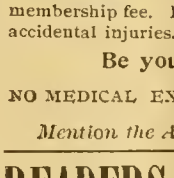

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GOLDEN QUEENS

From Texas. My Bees are bred **For Business,** as well as for **Beauty** and **Gentleness.**

☞ Safe arrival and reasonable satisfaction guaranteed. Write for Price-List.

Untested, $1.00—Tested, $1.50.

J. D. GIVENS, LISBON, Box 3 **TEX.**

10A26 *Mention the American Bee Journal.*

I ARISE

TO SAY to the readers of the BEE JOURNAL that

DOOLITTLE

has concluded to sell —BEES and QUEENS— in their season, during 1895, at the following prices:

One Colony of Italians on 9 Gallup frames, in light shipping-box	$7 00
Five Colonies.....	30 00
Ten Colonies.....	50 00
1 untested queen.	1 00
6 " queens	5 50
12 " "	10 00
1 tested Queen...	$1 50
8 " Queens.	4 00
1 select tested queen	2 00
3 " " Queens	5 00

Select tested queen, previous season's rearing . 4 00
Extra Selected for breeding, THE VERY BEST.. 6 00
About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.

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☞ Circular free, giving full particulars regarding the Bees and each class of Queens.

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PERFECTION Cold-Blast Smokers,

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For Circulars, apply to CHAS. F. MUTH & SON. Cor. Freeman & Central Aves., Cincinnati, O. Send 10c for Practical Hints to Bee-Keepers.

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Patents Pending On NEW PROCESS— NEW MACHINERY NEW PRODUCT—

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Result—Lowest Prices and Best Work. Wax Wanted.

Price-List and Samples Free.

W. J. Finch, Jr., Springfield, Ill

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Abbott's Space.

☞ Your hives came all right and went together well.....The "St. Joe" is a daisy. —BARNARD, MO.

That "St. Joe" Hive !

Write for a Circular and Say How Many Hives You Will Need.

Address,

Emerson T. Abbott,

ST. JOSEPH, MO.

Mention the American Bee Journal.

TESTED QUEENS

Are usually sold for $2.00. I will explain why I wish to sell a few at less than that. As most of my readers know, I re-queen my apiary each spring with young queens from the South. This is done to do away with swarming. If done early enough it is usually successful. It will be seen that the queens displaced by these young queens are never more than a year old; in fact, they are Fine, Tested Italian Queens, RIGHT IN THEIR PRIME; yet, in order that they may move off quickly, and thus make room for the untested queens, they will be sold for only **ONE DOLLAR.** Or I will send the REVIEW for 1895 and one of these Queens for only $1.75. For $2.00 I will send the REVIEW, the Queen and the book "Advanced Bee-Culture." If any prefer the young, laying queens from the South, they can have them instead of the tested queens, at the same price. A discount on large orders for untested queens. Say how many are wanted, and a price will be made. Orders can be filled as soon as it is warm enough to handle bees and ship queens with safety. Samples of REVIEW free.

Please mention this Journal. **W. Z. HUTCHINSON, Flint, Mich.**

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Chas. Hertel, Freeburg, Ills.
E. Kretchmer, Red Oak, Iowa.
Jos. Nysewander, Des Moines, Iowa.
G. B. Lewis Co., Watertown, Wis.
James Reynolds Elevator Co., Poughkeepsie, N Y.
Page & Lyon, New London, Wis.
La. Bee-Keepers' Supply Co., Donaldsonville, La.
E. F. Quigley, Unionville, Mo.
G. K. Hubbard, Fort Wayne, Ind.
L. Hanssen, Davenport, Iowa.
C. Theilmann, Theilmanton, Minn.
E. C. Eaglesfield, Berlin, Wis.
Walter S. Pouder, Indianapolis, Ind
E. T. Abbott, St. Joseph, Mo.
J. M. Jenkins, Wetumpka, Alabama
John Rey, East Saginaw, Mich.
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Mrs. Jennie Atchley, Beeville, Texas.

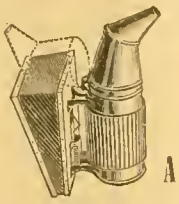
Is not such a steady trade a proof of real merit in the goods we sell? We also make a specialty of **Veils and Veil Stuffs** of best quality.

Beeswax Wanted at All Times.

Bee-keepers' Supplies, Smokers, Sections, Tin Pails, etc. **Samples of Foundation and Tulle FREE** with circular. Instructions to beginners with circular. Send us your address.

CHAS. DADANT & SON,

Mention the American Bee Journal. **HAMILTON, Hancock Co., ILL.**



THE 1895 CRANE SMOKER IS A DAISY.

Price, 3½-inch Barrel, $1.85, postpaid; or $1.50 by freight or express.

A. I. ROOT CO., Medina, Ohio, or J. E. CRANE, Middlebury, Vt.

This excellent Smoker was introduced some two years ago, since which time it has worked itself rapidly into popular favor. Its distinctive feature is the **Crane Valve,** by which the full force of the Bellows is secured without waste, and by which also smoke is prevented from going into the Bellows. The Legs are of Skelcton Malleable Iron, contracted at the feet so as to be out of the way of the fingers in handling, and are secured to the Bellows by bolts instead of screws. The Shield is of light corrugated tin, and bags next to the Bellows, thus giving ample protection from heat. The Cone Top easily tilts back for replenishing the Smoker, and is secured by a malleable-iron Hinge, the working parts of which are milled so as to insure accurate adjustment to the Stove or Cup. As to Fuel, it will burn anything, including soft coal, stovewood, planer-shavings; and it makes no difference how much the latter may be crammed down in the Cup, there will be the same strong blast as before.

PUBLISHED EVERY WEEK AT $1.00 PER ANNUM.

ESTABLISHED IN 1861

AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS

35th Year. CHICAGO, ILL., MAY 9, 1895. No. 19.

Contributed Articles.

On Important Apiarian Subjects.

No. 5.—The Production of Extracted Honey.

BY CHAS. DADANT.

To produce extracted honey largely we use half-story supers, the frames of which are just 6 inches deep, and of the same length as the frames of the brood-chamber. These frames are all fitted with combs, or comb foundation, and we preserve them from one year to another. This is one of the great advantages of extracting, for we thus preserve that which is the most difficult and expensive for the bees to build.

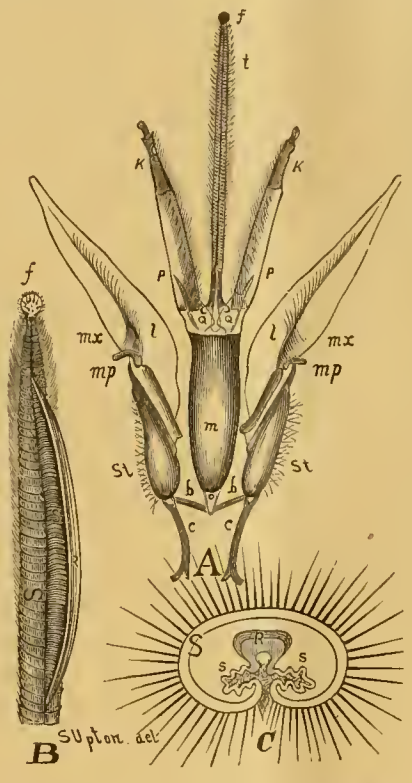
A few days before the opening of the crop, these supers are placed on all the hives which have their lower story filled with brood. The only hives that are left without supers are those that have been delayed in their breeding, either by the lack of fecundity of the queen, or by the weakness of the colony caused by bad wintering. These weaker colonies, together with one or two of the very best ones, are used in making artificial swarms, to keep up the number of colonies in each apiary; for we do not, and in fact cannot, depend upon natural swarming when running for extracted honey with large hives. The very best colonies are used for queen-rearing, and the others are divided up. Their brood would hatch at a time when it would be of no use for the clover crop, and by a timely division we can make good "swarms," which may help in the fall crop. At any rate, with a little help, almost every one of these "swarms" will make a good colony for winter. As a matter of course, we always have a few colonies that are altogether too weak to made either "swarms" or store honey. But these are exceptions.

Within 10 or 12 days after the crop has fairly begun, we make an examination of our colonies. In good seasons many of the best have their supers a third full, and it is then advisable to add a second story, which we usually put under the first. In a very good season, we sometimes use two half-

Edmund Whittlesey, Pecatonica, Ill.—See page 300.

stories from the first with our best colonies, and very often add a third before the crop is over. Much depends upon the season and the condition of the bees at the opening of the crop.

We usually wait until the entire crop is harvested before beginning extracting; but, in a few very bright seasons, we were compelled to extract, because the bees were out of room, and we had no more supers to give them. Such seasons may be marked in red letters on a bee-keeper's diary. Such were, with us, the years 1882 and 1884. In 1884, we extracted the honey, in one apiary, five different times, and made an average of nearly 150 pounds per colony. The general average, however, one year with another, does not exceed 50



The Tongue of the Honey-Bee—Magnified.

A, Tongue extended. B, Ligula, sheath extended. C, Cross sec. Ligula.

pounds per colony, and this is, after all, very satisfactory, even with honey at 6 cents per pound.

We find that, in some seasons, the colonies make a very good average of crop; but few supers remaining empty, while, in other seasons, the yield is very unequal; some colonies giving two and even three supers full of honey, while some others may not fill a half super. When such is the case, we find it profitable to equalize the crop by adding some full combs to the weaker colonies, and exchanging the supers with those that have all their combs filled. During a good honey-flow, it is not at all necessary to shake the bees out. We transfer bees and all, and find that everything goes on peaceably. When there is plenty of honey there is neither robbing nor fighting. The result of this equalizing is that there is no time lost when the extracting comes, as all the combs are full, and there is no handling of empty frames.

When the honey-yield is over, we begin extracting. If, however, it becomes necessary to extract before the end of the crop, it is of importance not to extract out of the supers that contain fresh honey, unless one wishes to be compelled to ripen the honey artificially. We know that it is the custom of many bee-keepers, to ripen their honey by keeping it in open vessels in a warm room, but we dislike this task, and much prefer to have the bees do their own ripening, as they do it more thoroughly than we can ever do it. We have never yet had any trouble with unripe honey, except basswood, which seems to be the most difficult to ripen of all grades. We have repeatedly extracted fresh-harvested honey of fall flowers, and have never had any trouble with it.

Honey which runs like water, is sure to be too thin to keep. That which has been harvested a week is nearly always ripe; even if it is still unsealed. On the other hand we have often known bees to seal their honey too soon, and in such cases it may ferment in the cells and burst the capping.

In my next I will give our method of taking the honey off the hives. Hamilton, Ills.

Wintering Out-Doors in a Cold Climate.

BY DR. E. GALLUP.

Paul Whitehead, on page 160, says that two of his colonies froze to death. Now I was born in Canada, 65 miles north of the Vermont line, where the mercury frequently went down to 40° below zero, and remained so for six to ten days in succession. We always wintered our bees on the summer stands. Our hives were straw and box hives. Sometimes we built a cheap open shed over them, and sometimes we set them on a bare plank without any cover whatever. In the fall we raised them up on blocks at the corners of the hive an inch high, to give them abundance of ventilation. They had to be about 18 inches in heighth in order to have abundance of honey above the cluster of bees. They never froze to death, but always wintered in splendid condition, providing they had honey enough.

But when I obtained my first colony of bees, I lost all of my new colonies for three winters in succession, by leaving the hive down close on the bottom-board. You see I was going to keep them warm. Not being ventilation enough, the breath of the bees accumulated in the form of frost all around above the cluster. Then every time the weather moderated, this frost would melt and wet down the bees, until they were all dead, with abundance of honey all around them.

My old colony being in a straw hive, and the entrance open at the bottom, and a 2-inch hole open at the top, they had abundance of ventilation, consequently no frost accumulated in the hive.

We had no American Bee Journal then—in fact, we did not know for years that there was any such a thing as a bee-book. I well remember how eagerly I read and re-read a small pamphlet by M. Weeks, of Vermont. He invented and patented, if I mistake not, the Weeks Vermont hive. I used several of them. It was a suspended box with a chamber in the top for comb honey, with a slanting bottom, and the bottom-board suspended by hooks and staples at the corners, and a button at the rear to regulate the ventilation. By having the slanting bottom-board, you see, a moth-worm would fall on the bottom and roll out of the hive so quick that he would break his neck. A great invention!

I notice on page 159, that John Napton says Dr. Gallup says: "All bee-men in California are honorable men." If I recollect rightly, I said: "So far as I know." Then he rather insinuates that queen-breeders are inclined to be tricky. Now, so far as I know, it does not necessarily follow that queen-breeding should make a person dishonest, by any means.

Santa Ana, Calif.

No. 7.—The Production of Comb Honey.

BY EMERSON T. ABBOTT.

PUTTING ON THE SECTIONS.—It is very important that the first lot of sections be put on at the proper time; for, if they are not, the amount of honey secured from any given colony will be greatly reduced. If put on too early, the brood is apt to be chilled, or breeding retarded. If put on too late, the bees will have begun making preparations to swarm, and after they have done this it is very hard to get them to begin work in the sections. I have read of a man who prayed, "Oh, Lord, start us right; for when we get started we are awful hard to turn!" The bees are very much like this man. When they once begin to get ready for swarming, they are "awful hard to turn." It is better, on the whole, to put them on too early than too late. This is one of the things that cannot be done by any set rule, but one must learn by experience when the proper time has arrived, as the seasons vary so much, as well as the conditions in different localities. For this locality I have found the best time to be a few days before the white clover begins to bloom.

When the first lot of sections are about filled, they should be lifted up, and another lot, fitted up in the same way as the first, put under them. When the last lot are partially filled, a third lot may be put under them. This process may be continued until there are four or five supers on the hive, if the honey is coming in rapidly, and there is a prospect of it continuing to do so until there are all filled. Of course, one must understand the nature of his honey-flow, and not put on so many sections that they will not all be filled and capped over. By watching the matter closely this may be guarded against. It has been my experience that a good, strong colony will fill two or three supers about as quickly as they will one, if they are properly manipulated.

After the honey is in the supers and capped over, the longer it can be left on the hive the better it will be. Of course, if a crop of dark honey follows closely on the light one, or there is danger, owing to the lateness of the season, of the the honey becoming soiled and darkened, it should be taken off at once.

When it comes to removing supers filled with fine, white honey, with me a bee-escape is an absolute necessity. The truth of the matter is, I am led to wonder why bee-keepers did not think of this wonderfully convenient little "tool" (if I may so call it) before. I am well aware of the fact that some of our prominent bee-keepers do not use the escapes, but they are to me none the less a necessity on that account. It is such a satisfaction to slip one of these little "machines" under three or four well-filled supers early in the day, and at night find the bees all out, and the honey uninjured by having little holes bitten in the cappings, as is sure to be the case if removed by any other process.

Having secured the honey crop, the next thing is

PREPARING IT FOR THE MARKET.

Here is about as important a part of the work as any of that which has gone before. It goes without saying that one must first get the honey crop before he can place it on the market, but he may about as well not have it as to place it on the market in such a shape that the price which he is forced to take will not pay for the cost of production.

The first thing necessary is to see that the honey is carefully sorted. Then it should be thoroughly cleaned and put into neat white crates. Another very important thing is, the crates should be the same all through; that is, the honey should all be just what it appears to be on the face of it. There is a great deal of talk nowadays about low prices and slow sales, but the man who has an honest, clean, first-class article of any kind need not go begging for customers, even in these times.

If I did not dread the denunciations which I may call down on myself from a certain class, I would say that the cause of much of the so-called hard times may be traced to negligence, inefficiency, dishonesty and vice. The man who spends most of his time loafing and drinking in the saloons need not expect to find a very full larder when he goes home late at night; neither need he expect to sell the fruits of such labor at a very high price.

I was very much impressed with a statement I read about a man's apples, the other day, in an article in an agricultural paper. The writer said there was found on the top of each barrel a slip which read, "This package was produced and packed by John Smith, who guarantees that when you have seen the top you have seen the whole." The man who makes such a guarantee and backs it up by his goods will not have to hunt very long for a market; and, what is better, he will have no trouble in keeping the market when he has once secured it; that is, if the "top" is a number one article.

We talk about laws for adulteration. Well, I believe in them, if they are of the right kind, but I have seen honey on exhibition at fairs faced as white as snow, while the crates further back were filled with honey so black and dirty that it was scarcely fit to eat. What kind of a law should be made for the man who put that on the market? None. Nature has made for him an inexorable law which decrees that he can never sell goods twice in the same place. Let me quote again from the agricultural writer referred to above: "Carelessness is the costliest habit one can fall into; and trickery, while it may seem to succeed for a time, must cost more than it comes to in the end."

Now, Mr. Editor, this winds up my talk on "comb honey"

for the present, except I may have occasion to refer to it again in answer to some objections which have been offered to some of my positions. These articles have brought me communications from all over the country, and I want to say to the writers of these letters that I would gladly have written each of them a personal letter, but my time has been so completely taken up that I have found it impossible to do so, and I beg of them to accept this as an acknowledgement of the receipt of the same.

If I have so written that I have helped any one, or stimulated any mind to greater activity, then I have accomplished the purpose I had in mind when I began.

St. Joseph, Mo.

More About the Size of Hives and Frames.

BY J. W. ROUSE.

It seems that it is hard to settle the question either of the proper size of a hive or the frame. While perhaps locality has something to do as to what size would suit best, it is not very probable it makes much difference. It is much easier to flow or float with the tide than it is to go against it, but we have been forced to some conclusions by observations even against our inclinations.

While I have always used the standard size frame, since locating here, over four years ago, I have had a chance to observe the workings of the American hive and frame as they have been made in this county for perhaps the last 20 years, and there are quite a lot of these hives in this county. While there are a number of serious objections (to my notion) to this hive, still I have observed that bees kept in them winter well, and those having bees in these hives secure honey in them, although there are many keeping bees in them that are not "up" very much in bee-ology, so they do not know very much about bees, or the best methods of handling them. I have always managed to secure some honey ever since starting in the business until last season. Although I have always run the most of my apiary in queen-rearing, I am sure if I had run for honey, especially for one or two seasons since being here, I should have secured a fair crop of honey. I have noticed that some other bee-keepers with these hives did secure fair crops of honey. I am aware that locality frequently has much to do with it in securing a crop of honey, still I am forced to the conclusion that the bees wintering in these hives, by being in a deeper frame, and more together instead of spreading out so long, build up faster in the spring, and so are ready for the harvest when it comes. As I said, these hives do not suit me, as I do not like their construction, not being easy to handle or manipulate.

I have had a hive in mind for some time, but as there are already too many kinds of hives, I have never built any according to my notion. Then, again, I have had no chance to give a new hive a test for the past two seasons. I will give a description of my idea, and, if thought worthy of notice, invite friendly criticisms:

A hive made long enough to take in three sections in a row instead of four, as now in the standard hive, and make the frames 11 inches deep, and the hive large enough to hold as much as a 9-frame standard hive. While I feel sure this size of frame would be good for the brood-nest, I do not think it the best for extracting, but they could be made shallower.

I will not give my complete ideas, but if this is found worthy of any discussion, I may give a more concise description in the future. Caution: I do not advise any one to adopt this size of frame, but would advise, especially amateurs and beginners, to follow in the well-beaten paths in bee-keeping, and let the more experienced try anything new. While it is possible for a beginner to get something good, more than likely the thing they would try has been used before and thrown away. Many more reasons can be given for using standard goods until something else shall be adopted, but I will rest at present.

Mexico, Mo.

Some Comments—A Little "Talking Back."

BY F. L. THOMPSON.

Making the Bee Another Animal.—On page 18 Mr. Abbott says: "To destroy the swarming impulse is to make the bee another animal, and it cannot be done." It appears, then, that when the python used its hind legs, which are now under the skin of its body, and the whale and the seal walked upon the land, they were not the same animals, or else they never did such things. Mr. Abbott must be quarreling with evolution; some features of which are respectable theories, at any rate, and cannot be put overboard with an assertion. If we suppose swarming to be a later mode of reproduction in its origin than supersedure, bees only have to revert a little to become "other animals."

Non-Swarming Bees.—Mr. Abbott also says: "All this talk of a non-swarming race is a fallacy. You might just as well talk of a non-laying hen being the best to hatch eggs." But hens have only one mode of reproduction; bees have two. To be sure, if they reproduced by supersedure alone under *present* conditions, a colony would be lost here, and a colony there, and finally bees would die out; but that, again, is a question of evolution. The fact that workers now occasionally act like virgin queens indicates a survival of a time when such proceedings were of some use to them—bees at that time may have been all laying workers and drones, the workers being fertilized; indeed, one case of a *modern* worker mating with a drone was given in this journal a year or two ago. Moreover, that a race should die out from its own characteristics would be nothing unnatural. Conditions of living are changing now, and have changed in the past, at varying rates of speed, and might easily change faster than the ability of a race to develop new instincts or organs. And would Mr. Abbott expect all strains of Leghorns, or all double flowers, to survive without reverting, if left to themselves?

Dealing with Adulteration.—On page 34 Mr. Dadant tells of an experience that I can appreciate. Let any one attempt to get up a honey route by canvassing several days in a *city*, as I have done, and before he gets through he will think some things. We have two theories of dealing with adulteration: one is, fight it—whether openly or not, it does not matter; the other is, keep still. Now, I am not sure that the first method has not done great harm, as the advocates of the second method declare (though whether that might not have happened anyhow is an open question); but what are you going to do about it *when the harm has been done?* That is practically the case now. If any harm remains to be done, it is only a question of time until it will be, even if we never say a word more about it. A little knowledge is a dangerous thing, but once gained, it cannot be eliminated and the former state of ignorance brought back. Whether actual adulteration is practiced little or much, makes no difference at all. The public just now has attained such a degree of suspicion of adulteration as to make it very difficult to sell extracted honey to strangers, and how in the world that suspicion is going to be lessened I don't see, except by keeping right on and wiping out real adulteration so completely that the source of suspicion will stop flowing. If that is an utterly hopeless undertaking, if there will always be enough left to set agog the public mind, *then* keep still—*i. e.*, from a purely politic point of view. As to whether it would be moral to do so, is another question. But while there is any hope, better have no half way measures about it.

Feeding Back.—That feeding-back experiment on page 41 is suggestive. I wish bee-keepers would hump themselves and present Mr. Taylor with a dozen nice theories of how to prevent honey from granulating when fed back, so that he could select from them, add to his own, and make an exhaustive experiment the coming season. Here is mine: If the honey fed was thinned to the consistency of fresh nectar, instead of adding only 15 or 20 per cent. of water, the longer ripening process *might* have the same effect as on nectar.

Mr. Hunny-Man Melbee may succeed in disposing of his extracted honey without feeding it back; but humanity in general needs providing for as well as a few geniuses.

Outside Cleaning-Up of Combs.—Mr. Sturtevant's experience in outside cleaning-up of combs (page 52), is quite in line with what was said at the Colorado convention. Two years ago a number asked whether he should feed outside, and was hopped onto by the others. This time there was not a dissenting voice as to the superior merits of the proceeding. Two things were agreed to be essential—that the feed should be quite thin, and that it should be spread over a surface large enough to comfortably accommodate all the bees. One member pours the feed over a number of boards, and says that when he gets through pouring, the feed is all gone where he started. It is readily seen that the neighbors' bees get no chance. Another uses a large quantity of old extracting combs, on which the feed is poured; another, ordinary chicken-troughs, filled with straw. Mr. Aikin goes around and taps on each hive, scattering a few drops on the alighting-board, so as to bring all colonies out at once. It was

agreed that spring feeding, conducted in this way, had a better effect on the bees than by the old methods. In response to a question, Mr. Aikin said that he fed whenever he felt like it, without a regular system, averaging perhaps once in two weeks. Nothing was said about brood being destroyed in consequence of the cessation of feeding.

In this connection it should be remembered, as was remarked at that convention, that before feeding for stimulation is utterly condemned the local conditions should be taken into consideration. Here the flow is so late that the old bees are gone long before, and plenty of young bees *must* be reared betimes to take their place.

Dequeening of Colonies.—I look forward to Mr. Chapman's article with much interest. Messrs. Aikin and Alford, both large honey-producers of this State, have for several years practiced dequeening on a large scale, and are now more than ever in favor of it. They made it appear quite enticing at the last convention here. Their method is, briefly, as follows: When increase is not wanted, two-thirds of the queens are killed, and one-third made into nuclei just before swarming-time, with a frame of brood and bees, a frame of empty comb, and another frame full of shaken bees apiece: at the same time all queen-cells are torn down; when another set are built, all are torn down but one, which is allowed to hatch. When cells do not hatch, or queens get lost, the nuclei are at hand to supply deficiencies. When increase is wanted, all queens are saved and put at the head of nuclei, and the old colonies treated as above. It makes plenty of work, but they get good crops.

The Bee-Killing Idea.—I am with Mr. Bevins on bee-killing (page 68). Still, logic is logic, and while there is a distinction between killing a calf and killing a bee, it does not amount to much. In both cases, the killing is supposed to be for man's advantage. I cast my vote for not killing anything except when increase would produce unendurable results. In my case, at least, there would be an appreciable qualm at applying sulphur to a colony, and I would have to make a downward step in order to overcome it. In the State of Illinois, I am told by a neighbor, the law is, or was, that the testimony of butchers should not not be received in criminal cases. Comment is unnecessary.

Wintering to Have Strong Colonies.—That seems a bright idea of Mr. Thurlow's, on page 67, though the extra furniture required is objectionable. But he does not say whether he would put the hives back in their old position in the early spring, or just before putting the supers on. For the experiment's sake, I would prefer the latter, as it would make two experiments in one—wintering and springing—if not a third, viz.: that a considerable portion of one end of the frames would have brood clear to the top-bars, which, according to some authorities, is just the thing for prompt work in the sections. Here is another suggestion, which he may take for what it is worth: How would it do to set an ordinary Langstroth hive *nearly* vertical, say at an angle of 80°? Then the frames wouldn't wiggle, if that was what was the trouble?

Arvada, Colo.

Further Consideration of Hive-Construction.

BY EDWIN BEVINS.

I see by some things that I have lately read, that I have got to get in some more words on the subject of hive-construction. Until the sectional brood-chamber hive comes to be adopted by all bee-keepers, this is a subject which will not "down." The day is far distant when the above-named hive will be the only hive in use.

I feel a little timid about crossing swords with Mr. Abbott, as I am only a rush-light in apiculture compared with him, but I must be excused for saying that I cannot say "amen" to all the objections he brings (page 146) against the flat hive-cover. Since I discarded the grooved cleat I have had no trouble with these covers on account of warping, and yet they have stood exposed to the sun day after day when the mercury in the thermometer ranged from 90 to 100° in the shade for many days together. These covers are made of one sound soft pine board, ¾ inch thick, and have hardwood cleats two inches square nailed *under* each end. They are painted on top with the best of white paint, and I have never had a bit of comb break down in the hive on account of heat, though the hives were fully exposed to the sun, and *not* very well exposed to the winds. The flat cover will stay with me.

Much has been said lately about the dovetailed corner (which is not dovetailed at all), and the halved corner. The difference between them is the difference between tweedle-dum and tweedle-dee. The fact is, that the plain corner is just as good as either, if firmly nailed. By using a square, the sides and ends of the hive can be kept at right angles to each other without much trouble while nailing.

I agree with Mr. Abbott entirely in what he says about the bottom-board of the dovetailed hive, always using the Van Deusen clamp, and could not be induced to think for a moment of having the bottom-board fastened permanently to the hive-body. I am also beginning to see that Dr. Miller was right when he prophesied that I would sometime come to understand the advantage of having those ⅜-inch strips attached to the bottom-board.

In the early part of the winter I made some 8-frame hives the same length as the Dovetailed, and 12 inches deep. These hives take a frame having an end-bar 11¼ inches long. I shall keep on making this kind of hive until I get all my bees that I intend to work for comb honey on frames of that depth. When this is accomplished I shall bid good-bye to the "standard" so far as the brood-chambers are concerned. To be tolerably certain that there is plenty of honey above the bees when a long cold spell of weather comes in winter, is worth more to me than the "standard."

Why is it that bees winter better in the old log gum than they do in the dovetailed and Simplicity hives? It is because the combs are deep, and there is plenty of honey above the bees right in line with the heat they generate, and is, therefore, available in the coldest weather. These brood-chambers take the bottom-boards, the covers, the supers—in fact, all the furniture of the standard hive except the brood-frames. If one does not care for the Hoffman frames, or if he cannot get them cut of the right dimensions without extra expense, he can saw, or get his frames sawed, ont of inch thick lumber and attach to them the Stephens' frame-spacers. These are cheap, and I believe will give satisfaction in practice.

Mr. Gathright wonders how many bee-keepers there are who extract from the brood-chamber. Well, I don't know. The Dadants say they seldom or never do so, and they use 10-frames in a hive just as deep and a little longer than the ones I have just described. Surely, with only 8 frames there would not be many occasions for extracting from the brood-chamber. Hive-bodies of standard size can, of course, be placed on these deeper brood-chambers for extracted honey.

Mr. Abbott says (page 149) that he never could tolerate a square joint. Here we will agree to disagree. I never could tolerate a bevel or a rabbet.

Leon, Iowa.

Cellar-Wintering—Preventing Increase.

BY HENRY S. EVANS.

The writer is one of the smaller bee-keepers who has been a regular subscriber to the American Bee Journal since 1871, and has read with much interest the various opinions and experiences of those who have been able to give light on the different branches of apiculture. All bee-keepers have their individual experiences, but all do not report to the bee-papers. I am not depending on the production of honey alone for a living, but during the past 24 years I have kept several colonies of bees; and in their management I have been fairly successful.

The question asked by "Tidiness," on page 134, attracted my attention, and perhaps part of my experience in cellar-wintering during the past eight years may be interesting to some.

Our cellar is under the dwelling-house; the walls and ceiling are lathed and plastered, and the floor is of waterlime. There is a 4-inch ventilator through the wall to the ontside on the west, and a door between the bee-cellar and that part of the cellar used for general purposes. The first winter I put 18 hives of bees in this cellar, with chaff over the frames, hive-entrances open, the ventilator left open, and the door above-mentioned closed. Nearly all writers at that time claimed that darkness was one of the necessary conditions for successful in-door wintering, so the cellar was arranged to exclude all light. With moderate weather the room became too warm, the bees uneasy, and the air impure, as the ventilator proved to be insufficient. Now I know that I might have safely opened the door, but at that time I thought it should be kept shut. Many bees left the hives during these warm spells, and died on the floor; but I swept them aside rather than to walk over them, and found no particular annoyance from that source. However, the success of that first winter was not entirely satisfactory, and the following seasons I endeavored to do better.

I must not occupy space to mention all the different ar-

rangements of the next few years, but come at once to the present winter. I now (April 2) have in the cellar 32 colonies of bees in 8-frame Langstroth hives, having loose covers and bottom-boards. The covers are sealed down as the bees left them in the fall. On each bottom-board I place a rim 4 inches high, the same length and width of the hives, with wire-screen over one end, and set the hives on these rims. This gives a 4-inch space below the bottom of the brood-frames, and an open front 4x12 inches covered with wire-screen. This seems to admit plenty of air, the bees cluster more or less in the open space, and all dead bees drop entirely away from the cluster. There are no dead bees on the cellar floor, and the annoyance mentioned by "Tidiness" is entirely avoided. I carried the bees to the cellar Nov. 14, and they have remained very quiet until this time. Soon they will be out on the summer stands to begin the labors of another season.

I have learned that a good circulation of air in warm weather is more necessary to the comfort of the bees than total darkness, and I have left the bee-cellar door open all winter. (I refer of course to the inside door first mentioned.) The outside cellar-door is open in mild weather, and closed in cold weather. The temperature in the bee-cellar the past winter has been as low as 38°, and as high as 48°.

For a good colony of bees to winter successfully in a cellar I would name three conditions, viz.: Plenty of good food; plenty of pure air; and proper temperature.

THE PREVENTION OF INCREASE.

Regarding the prevention of increase, I am as anxious as any bee-keeper to have my bees forget to swarm in their haste to gather honey; but they don't forget. I have managed them according to different plans, but I will only give my experience for the year 1893. When a swarm issued, the queen was caught and caged; queen-cells cut out of the old hive, the caged queen put in one of the brood-frames, and the swarm returned. In about eight days we again cut out the queen-cells, and in about two weeks from the time the swarm issued we released the queen, which at the time appeared lively and all right. We managed about a dozen hives in this way, but all the queens disappeared without laying any eggs. They were evidently destroyed by the bees as soon as released. Why were they not accepted? Perhaps some reader will suggest an answer. Their wings were not clipped.

Romeo, Mich.

Killing the Bees Instead of Wintering.

BY JOHN M'ARTHUR.

In reply to Mr. Bevins, on page 263 of the American Bee Journal for 1894, to his kindly criticism of my article on page 306, I would say that a generation has come and gone since I took my first lessons in bee-keeping. Many important changes during that period have been made in managing and manipulating the apiary. Owing to climatic and other changing conditions, we may look forward to as much change in the next generation—nay, even more than the past. There is no industry on this continent that has made more advance than bee-keeping, especially when we consider the many discouragements and difficulties that lie in the path that leads to success. Comparing past and present prices, there is certainly not much to encourage one to persevere in the business, were it not for the *something* in it that fascinates beyond the profits derived from the same. There is food for the mind—a great field for scientific research; and to those endowed with large observing faculties, there is a vast field awaiting new discovery, notwithstanding all that is written or known about the honey-bee from the time of Democritus to the present.

Therefore, I see no need of any one being chilled, by reading the article referred to, or even by following the directions of the writer regarding migratory bee-keeping, especially when it can be demonstrated that by doing so we can put dollars into our pockets. That is the main object of us all, I believe, notwithstanding the labors of Langstroth, Dadant, and a thousand others who have given their mite to assist in making known the natural history of the honey-bee and its economy.

Then Mr. Bevins charges me with being a wholesale murderer. Were bees not given to man for his own use? Why kill the cow? She gives milk and butter—is she not as dear to our affections as the honey-bee? Would it be profitable to keep and feed her eight months out of twelve, without any returns? No, no, Mr. Bevins; I like your sentiment and fine feeling, but that will not keep us alive. You let your feelings get the better of your judgment. I am afraid Mr. Bevins doesn't keep the sixth commandment himself. Does he not partake of the flesh of beasts, birds, or fish, killed? In the eyes of the law he who receives is as bad as he who steals. Are you guilty, or not guilty?

Then Mr. Bevins draws consolation from the thought that the wintering problem is not so serious in Iowa as in Toronto. The writer can say of the wintering problem, as the Hon. R. L. Taylor says of foul brood, it has no terrors, having solved that many years ago, either on the summer stands or in a repository. On the summer stands with a packing of 2½ inches of cork sawdust around the hives, with 5 inches on top, and sufficient stores will bring them through our severest winters. The winter repository is perfect of its kind, being in use for 14 years, and is 19 feet below the surface of the ground. The floor of the bee-cellar and bee-yard are on the same level—like a cellar. It is 26 feet by 40, and 6 feet high. It is the consumption of honey, coupled with 2½ months' labor in the spring and fall—bees too weak to gather surplus from the early honey flow, which is considerable in this locality. A large proportion of the bees were put into the repository on Nov. 20, and averaged 40 pounds of honey. If the spring of 1895 should prove as bad as its three predecessors, every pound will be used before we get an ounce of new.

Now, Mr. Bevins, if you are anything of an enterprising or enthusiastic bee-keeper, you can go South and purchase full colonies in May, and have them laid down in your bee-yard at, or very near, the price of two or three pound nuclei with queen, in the pink of condition; saving you the trouble of buying sugar and feeding. You seem to prefer nuclei to full colonies. Why, I should like to know, except it be to fuss and tinker with them, spending money on sugar just for the pleasure it gives you in seeing them develop into full colonies, forming attachments *so strong* that they must not be killed, after costing more than a full colony, not to speak of the labor.

I think any extensive Northern bee-keeper would be better employed, say in April and May, down South, working up his bees among the sunshine and flowers, than eking out a miserable existence 1,000 miles north, among snow and ice.

I shall be very glad indeed to meet Mr. Bevins, and a thousand more brother bee-keepers from across the line, at that mammoth convention to be held next September, in the city of Toronto, Canada; and no matter how we may differ, let us agree to disagree. Toronto, Ont.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

The Cotton States and Industrial Exposition.

This will be held at Atlanta, Ga., Sept. 18 to Dec. 31, and will be a big thing. It is the desire of the directors to have a big honey exhibit, and an International Bee-Keepers' Congress. I would be pleased to hear from all bee-keepers who are favorable to calling a convention of this kind.

Putting on the Supers.

Our spring being nearly a month behind the average of other years, all bloom is behind time, and bees have not bred up to what they should be at this date. Supers should now be on all your strong colonies, but you need not expect bees to go up into the sections as long as they can find room to place their honey below. When they commence to make new comb and bulge it out below the top-bar, they are about ready to go above. Now is the time to do your coaxing. It is objectionable to use any sections with brood in, but fill as many sections as you can with nice, clean, white comb, and alternate them with those with foundation.

If you wish to side store in wide frames in the brood-chamber, use separators if you wish the sections filled with nice comb; but for top-storing, if the sections are not too wide, and are two-thirds filled with foundation, separators are not necessary. It is one of the incontrovertible facts that the further the surplus department is from the brood-chamber, and the more obtructions are placed in it, the slower the bees are to go to work in it.

I think in most Southern locations top-storing is preferable to side. Place only one crate of sections on the colony at first, and when they get this about half filled, raise it up and place another crate beneath. By this arrangement, judiciously worked, you can get as much comb honey from a colony as it is possible in one season in our climate. Do not wait for all the sections to be capped before removing, for, if you do, some of the cappings will get discolored from the pollen-stained feet of the bees crawling over them.

Health—Money—Bees.

A few moments ago I received a letter from Mrs. ex-Gov. W. J. Northen, of Georgia, wherein she says: "When we lived on our farm there was nothing that gave me more pleasure than my bees; and it is work that a woman can manage without taking up the valuable time of the men. So many women write me for help to devise some way by which they can support themselves, but when I suggest bees, they are incredulous. They need an object lesson."

Four and five cent cotton ought to be argument sufficiently powerful enough to turn the dullest heads to the importance of the smaller industries—prominent among them is: Bees—honey—money.

There is also health in bees. The pleasure and interest taken in them, accompanied with the out-door exercise required, have enabled many an invalid woman to regain her health, and have imparted a rose-tint to many a blanched cheek.

The Busy Bee in Winter.

"The notion that the colder the winter is the less honey the bees use is a fable. Bees do not hibernate. It is true that bees in winter become apparently dormant, and remain inactive, but at the same time they must have a certain degree of animal heat, and must use honey as fuel to produce it."—W. BALLANTINE.

The above I find in the Nebraska Queen, and while, in substance, it is strictly true, as far as it is confined to the latitude of its author, when applied to the South the paragraph will need some modification.

The writer of the above is correct when he says bees must use honey to keep up animal heat; and I will further add that, when bees are in motion there is an expenditure of nerve and muscular power, and that this power can only be maintained at the expense of honey. For this reason it takes fully as much honey to winter a colony of bees in the South, with our mild winters, as it does North with your cold winters. Here the bees can fly every few days during the winter, and consequently use up their stores very fast.

The past winter with us has been unusually cold, and bees had fewer flights and consumed much less honey than usual. It takes, on an average, from 20 to 30 pounds of honey to carry a strong colony over the winter until the first of April. The bulk of this honey is consumed in rearing brood before they can gather much from natural sources.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

A Question on Transferring.

I have some bees and would like to transfer them from the old hives to new ones. Do you think it would set them back any this year, to transfer them next month, May? I want them to swarm this summer. H. H. W.

Independence, Oreg.

ANSWER.—I don't think it will put them back very much, but it must interfere somewhat with their household arrangements, and I believe I'd rather put it off till later, especially as you want them to swarm once. About three weeks after swarming there will be no brood in the combs, so there will be no loss of brood by transferring, and you may be a little surer of their swarming if you don't transfer first.

Material for Filling in Bee-Cellar Wall.

I wish to build a cellar for wintering bees—an outside cellar. Now suppose I ceil up the outside and inside to 2x4 scantling, then nail cleats up and down on the inside, one inch thick, then lath to them in the ordinary way, and plaster—what would be the best material to fill in the space between the ceiling? or would the cellar be warmer with the dead air space, without filling in anything? W. C.

Luce, Mich.

ANSWER.—I really don't know whether it would be best to put in any filling or not. Perhaps it is better without any. As to material for filling, sawdust might suit the case. But before you build the walls of wood, it might be well to notice what P. D. Wallace says on page 248. I don't mean where he talks about using T tins upside down, but where he talks about the advantage of a stone wall. My ideal would be a stone wall, then cleats or scantling lathed and plastered.

Some Other Insects in the Hive.

I have one colony, and looking over them this spring, I found the frames and walls of the hive full of small, cigar-shaped insects, having two horns, no wings, and their color is dark blue. They can jump and move very quickly about the hive. Are they destructive to the bees and honey? How can I get rid of them? C. E. H.

Canton, Ohio, April 26.

ANSWER.—I don't know what they are, but I feel confident you needn't trouble yourself about them, for they will do no harm, and as soon as bees get fairly to work they will disappear.

Green Paint on Queen-Cages.

If green paint is allowed to remain on the wire screen cloth that queen-cages are made of, will the bees be liable to get poisoned from it? "OUT WEST."

ANSWER.—I've had queens in such cages hundreds of times, and I never knew any harm to come of it. Still, if I could just as well do without the green paint I should prefer to do so.

Nuclei or Bees by the Pound, Etc.

I wish to begin (in a small way) keeping bees this spring.

1. Would you advise me to buy nuclei, or bees by the pound?

2. If I were to buy a colony of native bees, and another of Italians, would they be likely to quarrel or rob each other? Our natives are quite gentle. W. D. M.

Peris, Oreg.

ANSWERS.—1. If you're getting a queen with them, a nucleus is a nice thing, but if you want the bees alone, it will be cheaper to get them by the pound.

2. Blacks and Italians get along together just as well as if all of the same kind. I've had lots of them mixed in the same hive, and never knew any trouble. Of course bees of two different colonies are not always on the most friendly terms, but it makes no difference as to the kind.

Italianizing an Apiary.

How can I Italianize an apiary of 30 colonies by buying one Italian queen and also keeping all the colonies with queens? J. R.

Blyth, Ont.

ANSWER.—I don't know of any way you can do it and be sure that every colony has a pure Italian queen, for that not only means one that is reared from a pure mother, but she must also be purely mated herself. For the young queens that you rear stand a rather poor chance of being purely mated, with black drones all about them. However, you probably do not expect to have all purely mated at the start, and your question then amounts to asking how you can furnish to each of the 30 colonies a queen reared from your pure Italian queen, and yet have no colony at any time without a laying queen.

I'm not sure whether I could do it every time without fail, but I'll tell you how I have accomplished it in some cases that

I have tried. Get your colonies up in strong condition, never letting the queen lack for want of room to lay. At or a little before the time for swarming you will have from six to ten frames occupied with brood. Take out two of them with adhering bees, being sure you don't get the queen, replacing the frames of brood with empty combs. Put three stories of empty combs over the lower story, and put in the upper story the two frames of brood with adhering bees. Leave a small entrance at the upper story, just large enough for one or two bees at a time. In two or three days, when the bees have started one or more queen-cells in this fourth story, cut them out and give them a sealed queen-cell reared from your pure queen. If your bees act like mine they will have a laying queen in due time in that upper story, she having gone out of the upper entrance to be fecundated, although there is nothing to hinder her going down through the lower entrance.

I have, however, only tried this in a very few cases, and possibly in the next case there might be collision between the queens, so latterly I have put a queen-excluder over the first or second story.

When the queen is laying above, you can kill the old queen below, and put down the upper story for the second story. Or, if you prefer, you can leave the queen above until a strong colony is there, and then move either the first or the fourth story to a new location. Whichever one is left on the old stand will be very strong, and the removed one correspondingly weakened. I have left the two hives together in the same pile till the close of the honey harvest. If you want to keep the forces divided, without weakening the one removed, you can enlarge the upper entrance early in the season, and as soon as the hive becomes well filled with brood and bees, or any time later, up to the close of the harvest, put a bottom-board under the upper story so as to stop all communication between the two queens.

Will Bees Freeze with Plenty of Honey?—Taxing Bees.

1. Will bees freeze to death in single-walled hives when they have free access to all of the honey that they want?

2. Are bees assessed in other States the same as in Ohio? They are valued here at $1.50 per colony.

A good many have lost their bees by not giving them any protection. Soft maples are in blossom, and bees are working nicely, gathering pollen and honey. They have commenced brood-rearing well. W. L. R.

Pioneer, Ohio, April 23.

ANSWERS.—1. That might be answered with a plain no, but still if the temperature should be low enough and continued for long enough time, they would use up all the honey inside the cluster and then freeze and starve at the same time.

2. I believe they are not assessed in all States, but I don't know any good reason why they should not be. The man who has $1,000 invested in bees desires the benefit of government just as much as the man who has $1,000 invested in cows or sheep, and should be as willing to pay for it.

The Qualities of a Good Queen.

What qualities go to make up a good queen? The reason for this question is, that Mr. C. Davenport says, on page 231, that he destroyed a queen that was equal to ten frames; also that his best ones are hardly equal to 8 frames. The veterans probably know these things, but amateurs like myself find that all the authorities, as I understand them, say: Have plenty of bees when the honey-flow begins. Now, what is better than a prolific queen for accomplishing that result?

J. C. S.

ANSWER.—I can answer that in very few words. The best queen is the one whose workers will yield the most profit to their owner. But when I've given that answer you know just as much about it as you did before. I am not sure that I know enough to give the answer to which you are fairly entitled. I think Bro. Davenport ought to be hauled over the coals for leaving the matter just in the shape he did. Still, it is possible he has done a good service by calling attention that might not otherwise have been awakened.

It is perhaps a common error to suppose that the queen that lays the most eggs is the best queen, and he is right in saying that such is not always the case. For it is not merely numbers that count. Longevity has been claimed as an important factor, and it is quite possible that there is a good deal in it. Six weeks is counted the lifetime of a worker, and if we could have workers live twelve weeks, ought they not to store twice as much? Yes, and a good deal more. For if a bee does not commence field work till 16 days old, the one whose life is six weeks will have 26 days left for storing, while the one which lasts 12 weeks will have 68 storing days, or more than two and a half times as many as the other. Even a few days difference in longevity would make a perceptible difference in the crop.

Some bees are more vigorous and industrious than others, working more hours in a day, and storing more in each hour.

Just now the French are paying a good deal of attention to the length of bees' tongues, and as it is a comparatively easy thing to measure the tongues of each colony separately, it is easy to understand that the bee with a long tongue might get nectar from flowers having cups too deep for the common tongue to penetrate.

Of course I'm no mind reader, and I don't know what Bro. Davenport had in mind, but I think you can see from what I have said that a queen laying only 1,500 eggs in a day might be worth more than one which laid 2,000 in a day, providing the workers of the latter were short-lived, lazy affairs and the others the reverse.

After all, I am inclined to think that the general rule will hold true, that the most prolific queen is the best.

Bees Hanging Out While Others Work.

I wrote you asking about my bees, on page 202, but I should have told you that while my bees were hanging on the outside of the hive, other bees right beside mine were swarming and storing honey. But mine just seemed to idle away the time. They have wintered well, and I hope to have both bees and honey this year. L. E. W.

Hadley, Mich.

ANSWER.—It is possible there may have been some temporary conditions to account for their inactivity, and it is possible that the trouble was in the character of the bees. In the latter case, supposing they show the same laziness this year, the thing to do is to give them a queen of industrious stock.

Brightening Dark Honey.

How can I get dark and brown honey bright and yellow? I had no extractor till now, and melted the honey with the fire, but did not boil it, and after getting cold I took off the wax on top and put the honey in bottles through a close wire net. People would not buy that honey—only a bit from nice, white combs, gotten out yellow (of course, broken combs). I sell white comb honey at 25 cents per pound. All the other is dark. Is there any way to get that honey bright and yellow? MEXICO.

ANSWER.—I don't know of any way to make dark honey light. If the honey was light before you melted it, it's a pretty clear case that you used too much heat, even though you did not boil it. Heat will spoil honey long before it comes to the boiling-point.

Mailing Drones with Queens—Evaporating Honey.

1. Is it safer to send virgin queens with drones than with workers? I have never known that drones kill bees.

2. Could 5-gallon cans be used as evaporating tanks, by placing them in a warm room in the sun, by having them 45° or so, the screw top at the highest point and open? There seems to be air going in and out all the time. H. V.

Paso Robles, Calif.

ANSWERS.—1. I never heard of sending drones with queens, but I'm afraid it wouldn't work. Drones are very helpless beings, and I doubt whether they would stand a journey without having some of their sisters along to take care of them.

2. Evaporation would take place much more slowly than if all were open, or even if there were two holes instead of one.

Honey as Food and Medicine.—A new and revised edition of this 32-page pamphlet is now issued. It has 5 blank pages on which to write or paste recipes taken from other sources. It is just what its name indicates, and should be liberally distributed among the people everywhere to create a demand for honey. It contains a number of recipes on the use of honey as food and as medicine, besides much other interesting and valuable information. Prices, postpaid, are: Single copy, 5 cts.; 10 copies 35 cts.; 50 for $1.50; 100 for $2.50. Better give them a trial. Send all orders to the Bee Journal office.

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George W. York, - - Editor.

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Editorial Budget.

Mrs. Chas. Dadant, I regret to learn, died Friday morning, May 3, aged 73 years. She was married in 1847, and came to this country in 1863. She had three children. I know Bro. Dadant and family have the tender sympathy of all bee-keepers in their sorrow, and particularly that of the Bee Journal readers to whom the Dadants are so well known.

An International Congress of Bee-Keepers is mentioned by Dr. Brown in his department this week. It has been suggested as a feature of the Cotton States and Industrial Exposition at Atlanta, Ga., some time between next Sept. 18 and Dec. 31. Now the great South will have another opportunity, as it did at the New Orleans Exposition in February, 1885, to have a grand convocation of bee-keepers from all over the world. At the New Orleans bee-congress 24 States and Canada were represented. Dr. Brown was the permanent President, and Thos. G. Newman the Secretary.

Let all who are in favor of holding another International Bee-Keepers' Congress the latter part of this year, in Atlanta, Ga., communicate such desire at once to Dr. J. P. H. Brown, Augusta, Ga. The Bee Journal will co-operate in every way possible to make it a success, if it is decided to hold it.

Father Langstroth and his work for bee-keepers is appreciated everywhere. Gleanings reports the receipt of $10 from an admirer of Father L., who keeps bees in Costa Rica, one of the republics in Central America. The amount has been forwarded to Father Langstroth, and gratefully acknowledged by his dutiful daughter.

Editor Root has this to say further about the above gift and its recipient:

I am sure our American bee-keepers appreciate this, not because of the largeness of the gift, but because of the spirit which prompted it. I can only regret that many of our American bee-keepers, using the Langstroth system, have forgotten to send in their annuity fund even when they agreed voluntarily to send it each year as long as Mr. Langstroth lived. I am informed that our venerable and much-respected friend is in very feeble health, and he does not seem to improve with the charming spring weather.

If any who read this feel that they can spare something to help Mr. Langstroth in his declining days, please send it to this office or to The A. I. Root Co., Medina, Ohio, and it will be promptly and properly forwarded. Should you prefer to send your gift direct, address thus: Rev. L. L. Langstroth, 120 Ford St., Dayton, Ohio.

Langstroth and the Movable Frame.—Mr. W. L. Rickey, of Pioneer, Ohio, sends a clipping taken from a monthly paper called Comfort, and printed in Maine. The item reads as follows:

The popular notion that Langstroth was the inventor of movable frames for bee-hives is an error. Such frames were known in Germany 30 years before 1852, the date of Langstroth's first patent. In 1843 Baron von Berlepsch made use of movable frames, and he refers the idea to a man named Propokovitsch, who employed it in 1841. Evidence to prove this statement is obtainable at the Patent Office in Washington. Furthermore, in a book published in London in 1841, entitled the "Natural History of the Honey-Bee," on page 300, may be found a description of comb-frames hinged like the leaves of a book.

By the way, the notion held by bee-farmers, that the dovetailed method of constructing hives has been patented, and must not be imitated, is a mistake. It has never been patented, and is a common right. Anybody may manufacture such hives.

Oh, no; Langstroth never invented the Langstroth hive. Shakespeare never wrote Shakespeare, and there never was such a person as Napoleon Bonaparte! It does seem strange that any respectable paper would print such stuff. If you care to know particulars, you will find the ground all gone over in the first volume of the American Bee Journal, 1861. The leaf-hive mentioned was the Huber hive of a hundred years ago. Langstroth gave a description of it in his book, and acknowledged his obligation to Huber, but it was valuable only as a hive for making observations, and no practical bee-keeper would think of using it; and if you will look on page 13 of the American Bee Journal you will see a picture of the Propokovitsch hive, and you can see whether you would like to use it. Father Langstroth was robbed of much wealth that should have come to him through this hive, and now that the patent has expired, the man who would rob him of a particle of the honor to which he is richly entitled, must be very low down in the scale.

Mr. H. D. Cutting, of Tecumseh, Mich., in a letter received April 29, says he has had about three weeks of la grippe, but was getting better, and hoped soon to be all right again. Bro. Cutting was a constant attendant in the honey department of the World's Fair for several months, having in charge the fine exhibit made by the State of Michigan. I had many a pleasant chat with Bro. C. that memorable summer, as well as with the other State superintendents of apiarian exhibits.

Mr. Edmund Whittlesey.

On March 28, Edmund Whittlesey, of Pecatonica, Ill., bee-keeper, farmer, and useful citizen, passed to the great beyond, another victim of that insidious malady, la grippe.

Mr. Whittlesey was born in Stockbridge, Mass., June 17, 1814. His boyhood and youth were passed in Lorain county, Ohio. In 1835 he came to Winnebago county, Illinois, and soon after took up the tract of government land on which he resided for more than 50 years. In 1839 he was married to Susan Vance, whose death occurred 10 years ago. One daughter and two sons survive.

Mr. Whittlesey was a man whose strict integrity and kindly nature won him the esteem and confidence of his fellow men, and many were the positions of honor and trust which he was called upon to fill during the past half century. He was the oldest justice of the peace in continuous service in Illinois, having held that office since 1849. He was also school treasurer of his township for over 40 years.

Mr. Whittlesey had been a bee-keeper ever since he established a home of his own. Bee-hunting was always one of his favorite pastimes, and the foundation of his apiary was a section of a bee-tree which he discovered, sawed out and

brought home. For many years he kept bees as a side-issue, but during the last 14 years of his life he gave his attention almost exclusively to bee-keeping. He was an enthusiast in his chosen pursuit, and was never so happy as when at work in the apiary. He was a great reader of bee-literature, and a frequent attendant at conventions. For several years he was President of the Northern Illinois Bee-Keepers' Association, and was also a member of the Northwestern when it was in existence.

Mr. L. Highbarger, an extensive bee-keeper at Leaf River, Ill., who knew Mr. Whittlesey well, writes as follows:

To know Bro. Whittlesey was to love him. I don't think he had an enemy on earth. He was one of the oldest bee-keepers in northern Illinois, and was one of the organizers of the Northern Illinois Bee-Keepers' Association. When the frame hive was invented by Langstroth he bought a shop right, and to-day he has about 60 colonies of bees in as fine condition as can be found in Illinois. L. HIGHBARGER.

Honey-Plant Named.—The following letter with samples of plants were mailed to Prof. Cook, who kindly forwarded the letter and his answer to this office:

I have mailed samples or twigs of two honey-bearing plants which grow here in dry washes. Will you please give me the names of them, and say whether or not they are considered *good* honey-plants. No. 1 is blooming now, and seems to have quite a good deal of nectar. No. 2 is just beginning to put out foliage—it blooms in April and May. It has a very small purple flower, and the bees work on it quite freely.

Banning, Calif., March 4. D. O. BAILIFF.

Prof. Cook replies to the above as follows:

The plant mentioned by Mr. Bailiff as now in bloom is *Isomeris arborea nutt.* It belongs to the caper family—cappa ridaceæ—and so is a near relative of the famous Rocky Mountain bee-plant and spider-plant. From its near relatives, we do not wonder that it is a good honey-plant. The fact that it blooms so early, is also in its favor.

I find our bees are gathering honey each day, and so are breeding up very fast. We have had another rain. We have now had in all about 24 inches. The prospects are excellent for a fine honey crop. A. J. COOK.

Claremont, Calif., March 20.

Among the Bee-Papers

Conducted by "GLEANER."

DR. J. P. H. BROWN AND THE SOUTHERN DEPARTMENT.

Those who have had the pleasure of meeting Dr. Brown at the conventions of the North American Bee-Keepers' Association, which conventions he has attended a number of times, will be glad to see his name at the head of the "Southern Department" in the American Bee Journal. It's a good place for him to fill, and he's a good man to fill the place.

FEEDING IN SPRING FOR WINTER.

H. R. Boardman advocates this in Gleanings, and uses an entrance feeder of his own invention. It is an ordinary glass fruit-can reversed, with a special cover having a flange sticking up high enough so as to make what is known as an atmospheric feeder on the Hains style. This is then inverted and set right down over a hole in a box so constructed as to fit closely to the entrance on one side. Not only does the box fit close to the entrance, but two projecting points enter the entrance, so that a robber to get at the feed must come clear inside the hive.

THAT "JOLLEY" VIEW.

Amid the dismal forebodings as to the future of bee-keeping, it's pleasant to get the views of those who look on the brighter side. On page 245, Ed Jolley takes a bright view of the case, and I don't know that we may not expect the good as well as the bad. Certainly the bad seasons cannot be attributed entirely to the cutting away honey-trees or the clearing away of weeds that produce honey, although in some places that may have contributed. And although cultivated crops may take the place of some weeds dear to the bee-keeper's heart, yet who knows whether among the new things introduced as forage plants there may not be some which shall surpass in value as honey-plants those displaced?

But is that a slip of the pen to take slips of basswood—the idea of a poet calling the beautiful linden "basswood;" or is it poetic license, to suppose that such slips will grow wherever they are planted? But he's sound in his advice to put sweet clover in the pasture.

WHY DO BEES STAND MORE COLD OUT-DOORS THAN IN CELLAR?

Dr. Miller wrestles with this problem in Gleanings, but it is pretty nearly an even thing which comes out on top. His conclusion is: "Now I don't know that the impure air is the whole reason why bees in the cellar must be kept warmer than out-doors; but I suspect it has much to do with it, and I am ready for any light that comes."

EQUALIZING COLONIES.

On page 278, J. S. Scott says: "A good way to equalize the strength of colonies of bees in the spring is to change the hives around." I'm afraid that isn't the safest advice to be flung before every beginner. If you make a strong and a weak colony exchange places, the weak one will gain by it, but in most cases it is doubtful if the gain will overbalance the loss to the strong one.

BROOD AND HONEY CROWDING.

On page 262, H. D. Edwards speaks of honey crowding out the queen in a large hive, and then of the brood crowding out the honey in a small hive. This is somewhat confusing. If in a small hive bees give brood the preference, will they do just the opposite in a large hive, and have less brood in a larger brood-chamber? Do the bees change their instincts according to the size of the hive?

DID THEY FREEZE OR STARVE?

A difference of opinion not easily arbitrated is likely to arise between Messrs. Abbott and Bearden—see pages 191 and 283. A cluster of bees died with plenty of stores within easy reach if it had been warm enough for the bees to break cluster. Mr. Abbott will say the bees lived till they used up all the honey in the cluster, and if more honey had been in the cluster they would have lived longer; so of course they starved to death. And that seems all right. On the other hand, Mr. Bearden will say the cold was the cause of the bees not getting their stores, so the cold was the cause of their death. Moreover, the bees, although weakened for lack of sufficient food, would have lived for a time had it been warmer, but weakened as they were, they succumbed to the cold and froze to death. And that seems all right, too. How would it do to compromise the matter by saying the bees starved and froze to death?

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

A Bad Practice.—"A live, intelligent, enterprising bee-keeper who is willing to get up at three o'clock in the morning and work until eight in the evening."—B. Taylor, in Bee-Keepers' Review.

This is laid down as one of the elements of success in the production of honey, and I want to here and now offer my protest against any such teaching. If Friend Taylor thinks he must get up at three a.m., let him do so, but I hope no one engaged in the production of honey, or any other business, for that matter, will indulge the thought for a moment that such a course is one of the essentials of making the business a success. I feel like saying that the man who begins work at six and puts in his time faithfully until the hands on the dial indicate that hour again, and by so laboring cannot make a success of his business, would better quit it at once and try something else. The bane of modern life is fret and worry accompanied by exhausted nerves, and no man who makes a practice of getting out of bed at three in the morning and working until eight in the evening can stand the strain very long. There is something more of life than mere money-getting, and we owe something to the coming generations. Children are at least entitled to be born into the world with sound minds and healthy bodies, and they cannot be so born of parents who thus encroach on the hours set apart for rest.

My advice would be to spend at least two hours of that

time in good, sound sleep. Why, Friend Taylor, if I had to get up at three o'clock every morning, I do not think I would last more than one year; and if I did, I would be so nervous that life would be a burden to myself and all about me. I can do all the work I want to do in one day and get out of bed at six o'clock, and it is a very rare thing when I am not in bed a few minutes after ten. Of course, all people are not constituted as I am, but I am quite sure that no bee-keeper can afford to turn himself into a machine for grinding out money, and start the grinding at three a.m. every day.

I am also fully persuaded that most people who are engaged in rural pursuits would accomplish more if they would put more brains into their work, and take less time to do it. That is, give more time to recreation and intellectual improvement and less to the drudgery of life. I detest a lazy or shiftless man, but no one has to turn out at such an early hour in order not to be justly called either one of these. There may be times when duty will call us out at an unreasonably early hour, but I am quite sure that neither duty nor the condition of success calls upon the bee-keeper to rise at three o'clock in the morning. So, I say, don't do it!

Carniolan Bees.—"At first sight you would probably call them common black bees, and possibly at last sight."—Dr. Miller.

It seems strange to me that so many people persist in saying that there is not enough difference between the blacks and Carniolans to enable an ordinary mortal to distinguish one from the other. It would seem that these people had never seen any pure gray Carniolans, or else their blacks are not the kind which inhabit this neck of the woods. I have had a number of colonies of Carniolans, and I have never found any trouble in distinguishing them from the blacks. Neither has any one ever come to my apiary, and had his attention called to these bees, who could not see the difference at once.

I bought a queen once of a prominent breeder of Carniolan queens, the progeny of which could not be distinguished from common blacks, and there was a good reason for it. The queen was a black queen, mated to a black drone, and her bees *were* blacks. I very much fear that many of the queens which have been sold for Carniolans were nothing but German bees, pure and simple; and, of course, one might call the progeny of such queens "common blacks" first, last, and altogether.

I think it is just as easy to tell a Carniolan bee from a black as it is to tell a horse from a mule. If some shall ask, "How?" I will simply say that they do not look alike, as any one can readily see who will place the two side by side. There is so much difference in their looks that I do not see how any one can possibly take one for the other. Or at least this is true of all *I* have seen.

Canadian Beedom.

Conducted by "BEE-MASTER."

A Talk About Bees.

In Germany, where there are more bees and bee-keepers to the square mile than in any other part of the world, it is no uncommon thing for village and country parsons, in their public prayers, to put up the petition, "God bless the bees!" With what amazement such a petition would be heard in the rural churches of Canada. Were it not for the astounding ignorance of both ministers and their flocks about natural science, we might expect to find this and many other similar petitions included in the devotions of the sanctuary, and embodied in the book of common prayer. But most Christians, whether lay or clerical, know very little if any more about bees than is embodied in that juvenile song of Dr. Watts', which we so often hear alluded to, usually more in jest than in earnest. Like many other compositions meant for the edification of the young and rising generation, this famous song about "the little busy bee" is not so true to Nature and to life as it might be, and ought to be. Dr. Watts himself seems to have known little more about this insect than that it is a model and a marvel of industry, which is just as true of the devil as it is of the bee. This fact, indeed, is recognized by the poet in the couplet:—

"For Satan finds some mischief still,
For idle hands to do."

It is a curious fact that the very first verse of Dr. Watts' song contains two great errors about the insect whose praise it sings,—

"How doth the little busy bee
Improve the shining hour,
And gather honey all the day
From every opening flower."

In the first place, the bee does not *gather honey*. It gathers the sweet nectar secreted by the flowers, which is converted into honey by some mysterious process that goes on in the stomach of the bee. The nectar is transmuted into honey by the busy gatherers of it, and the change takes place during transit from the flower to the hive.

A second error is that the bee gathers "from every opening flower." It is only *some* flowers that secrete and yield nectar. Attracted by the aroma of certain blooms, the bees visit them and are invariably rewarded by a tiny drop of the precious liquid of which they are in search.

But not to dwell farther on the fragment of juvenile poetry quoted from Dr. Watts, we may pass on to notice matters of greater practical importance. Among these our indebtedness to the bees and our dependence upon them may be adverted to. These are far greater than most of us imagine. After all, honey-gathering is not their most important function. We owe to them the beauty of the flower, the fertility of the seed, and the ripe lusciousness of the fruit. The bee that thoughtless mortals try to strike down and kill, often only to find what an alert fighter it is, and what a sharp rapier it carries, is one of the greatest benefactors of the human race. A brief reference to a few simple facts will abundantly demonstrate the truth of this statement.

Flowers are the reproductive organs of the plants that bear them. No seed is produced unless pollen shed by the anthers is carried to the pistil. Some flowers have anthers and no pistils: these are male blooms. Others have pistils and no anthers: such are female. But by far the greater number are hermaphrodite; that is, they carry both sexes within themselves. Female blooms must have pollen brought to them from male blooms, generally speaking, of the same species, or the seed will fail. Often the seeds will not develop even though the flower has both stamens and pistils, unless the pollen of another flower is brought to fructify them. The wind and insects are the two servants that perform this work. Wind-fertilized, or anemophilous flowers, are, as a rule, scentless, honeyless, and inconspicuous. But flowers that need the aid of insects to fertilize them must invite their visits; hence honey is offered; sweet perfumes attract; and fine colors reveal. Hermaphrodite flowers need insects scarcely less than others, for although they produce pollen, yet their own pollen is not so desirable as that from other blooms. The experiments of that great naturalist, Darwin, on Cross-Fertilization, have brought to light much of the wonderful working of the laws of insect life along these lines. But the subject is too voluminous to be more than touched in passing.

Among the insect tribes, bees are the chief agents in the fertilization of flowers. The necessary process is accomplished in various ways. A species of the willow-herb, *Epilobium angustifolium*, must have all its own pollen carried off to other flowers before its pistils develop, when, in turn, it is fructified by the pollen from other blooms. The primrose, cineraria, orchids, tropæolum, heath-blooms, and other flowers that might be named, present curious and diverse contrivances for utilizing the visits of the honey-bee. The strawberry, the most delicious fruit, often owes its fructification to the bee. It is estimated that to produce a single perfect strawberry from one hundred to double or triple that number of independent fertilizations must be accomplished. If fertilization fails, instead of a luscious berry we have a hard, shrunken, greenish mass.

Ignorant people suppose bees to be enemies of fruit, whereas, without them, we should not have so much. It is a mistake to imagine that they injure fruit-blooms by visiting them. Such visits are often absolutely necessary if any fruit whatever is to form and mature. It is also a mistake to suppose that bees puncture grapes or other ripe fruit. They do nothing of the kind. If the skin is broken by any other means, they simply gather up the sweet juices that would otherwise go to waste.

A B C of Bee-Culture.—We have some of these books left, and in order to close them out quickly, we renew the low offers we made on them. This is the fine cyclopedia of bee-keeping by A. I. Root, containing 400 pages and nearly 200 engravings. The regular price is $1.25, but we will send the American Bee Journal one year and the "A B C" bound in cloth—both for only $1.80; or the parchment cover (very heavy paper) "A B C" and the American Bee Journal one year—both together only $1.50.

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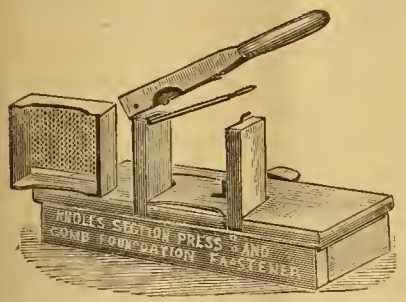

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14A13t Please mention the Bee Journal.

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COMB FOUNDATION MADE CHEAP.

8c. a lb. for Brood and 12c. per lb. for Extra Thin, when Wax is sent to me; and I will guarantee that there is no better made. Price-List and Samples free to all. **August Weiss, Hortonville, Wis.**

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11A13 *Mention the American Bee Journal.*

General Items.

Bees Wintered Well.

I put eight colonies of bees into winter quarters, and they all came out this spring good, and are working lively. I have bought seven more colonies, and they were a bargain—were in good condition so far as stores goes.

We have had a very hard winter and a late spring, but the buds and flowers are coming along fast now, as there have been some warm, bright days and warm rains, and the bees are employing the golden moments.

I saw Mr. Golden's description in the Bee Journal, of his combination feeder, and not being satisfied with the two different ones which I have tried, I sent for a sample of the feeder, and was much pleased with it. I have not tried them yet, but I shall do so as quick as I get some made. I have no doubt it will be just the thing. The combined feeder and ventilator is sure to "fill the bill." I thank you, Mr. Editor, for the good your paper has already done me in giving good advice and hints.

CHAS. A. BILLINGS.

Clyde, N. Y., April 22.

Ready for What May Come.

Bees have done poorly for three years with us, still I have 120 colonies, with their dishes right side up to catch what may come. I wish the "old reliable" American Bee Journal success. ABEL GRESH.

Weedville, Pa., April 19.

Good Prospects for Fine Season.

I am highly pleased with the American Bee Journal, and I think every bee-keeper should read it. I have gained a great amount of valuable information from it. My bees have come through the winter with very slight loss, and prospects are good for a fine honey season. JOHN D. MAY.

Hughesville, Mo., April 19.

Good Results from Nuclei.

I see on page 270, that Bee-Master is getting wild. He says he is importing bees from Florida to test whether or not bees from the South sent North in the spring will pay. Now, I thought Bee-Master was nearer up with the bee-keeping times than this, as we have done this for more than ten years, and it is a success beyond a doubt in the hands of the right parties. As he seems to doubt Mr. Smith's statements in my advertisement in Gleanings, I submit Mr. Smith's letter in full, and it is unsolicited. Mr. Smith had tried the same thing a year or two before, when he found it paid him, and then he tried on a larger scale, which brought the large report he gives. As Mr. Smith is big enough to speak for himself, I will not say more, but will just allow the readers to draw their own conclusions.

But, I would like to impress upon the mind of Bee-Master that our nuclei have more than two or three dozen workers and a queen. JENNIE ATCHLEY.

[The above and the letter which follows are given because Mrs. Atchley thinks an injustice has been done her by Bee-Master, in writing what he did about her advertisement, and because of its being published in these columns. Surely, no injury was intended or thought of, but in order to set matters all right, Mrs. A.'s and Mr. Smith's letters are now published, the latter reading as follows:—EDITOR.]

DEAR MADAM:—I thought I would report to you what my bees have done this season. Of the 50 one-frame nuclei that I bought of you last spring, I sold 26, leaving me 24.

GOOD CHEAP SIMPLE Wash Dishes

With the Faultless Quaker.

No breaking, no chipping; no scalded fingers, no soiled hands, no dirty clothes, no muss. You turn the crank, the machine does the rest.

SAVES DISHES, TIME, HANDS, MONEY, PATIENCE.

Sells at sight. Agents, both men and women wanted. We can give you a profitable business, easy work, good pay. You will be doing womenkind good and make happy wives and daughters by introducing the Faultless Quaker. Write now for agency terms

THE QUAKER NOVELTY CO.
SALEM, OHIO.

16A4 *Mention the American Bee Journal.*

For Sale or Exchange !

Lot of Miscellaneous Supplies, some new and some second-hand. **Must be disposed of on account of removal.** Write for what you want or for list of Goods. Will exchange for team, harness, buggy, or platform wagon, or offers. **F. H. RICHARDSON,**
15A8t LACLEDE, Linn Co., MO.

Mention the American Bee Journal.

GOLDEN BEAUTIES

AND 3-BANDED ITALIAN—ALSO SILVER-GRAY CARNIOLAN QUEENS

Reared in separate yards. Italians warranted purely mated, all at same price. Untested, 75c. each; 5 or over, 10 per cent. off. Tested Italian, $1.00. Write for Catalog of **Bee-Keepers' Supplies.**

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I will send a Guaranteed 5-Banded Yellow Queen, bred from a Breeder selected from 1000 Queens (some producing over 400 lbs. of honey to the colony); or a 3-Banded Italian Leather-Colored Queen direct from a Breeder imported from Italy. Oct. '94—**at 75c.,** and a special low price for a quantity.

My secret is to sell an extra-large amount, which enables me to sell at low prices. Will run this spring 350 Nuclei—have 1 home and 4 out apiaries. **Booking Orders Now**—will begin shipping about May 1st. No Queens superior to my Strain.

☞ Send for Descriptive Catalogue and Testimonials, to

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COMB FOUNDATION.

Made by Improved Machinery.

Get Samples.

Here are prices by the pound—just compare.

	1 lb.	5 lbs.	10 lbs.	25 lbs.
Heavy or Medium Brood	42c.	40c.	39c.	38c.
Light "	44	42	41	40
Thin Surplus	50	47	46	45
Extra-Thin Sur.	55	52	51	50

☞ If wanted at those prices, send to

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STRAW HIVE Latest and Best.

Perfectly adapted to Modern Bee Culture.

Illustrated Circular Free.

HAYCK BROS., QUINCY, ILL.

19A8 Please mention the Bee Journal.

The Adels—A New Strain of Bees

Friends, I shall be prepared to fill orders for **Adel** and **Italian Queens** June 1. Try them Warranted, $1; Tested, $1.50; Select Tes., $2.

17A **Joseph Erway, Havana, N. Y.**

Write to Wm. H. Bright—

For prices on all Improved Bee-Fixtures—

Hives, Sections, Comb Foundation, Brood-Frames, Extractors, etc.,

At Bottom Prices.

Golden Italian Queens $1.00 each. Free Price-List.

Wm. H. Bright, Mazeppa, Minn.

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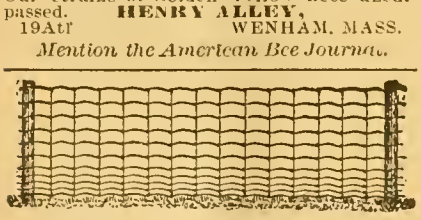
—COMBINATION—

SWARM-CATCHER & DRONE-TRAP.

Full Description, nicely illustrated, sent free. Also our PRICE-LIST of **Beautiful Yellow-Banded Bees and Queens.** If Queens do not give satisfaction, no charge will be made. Our Queen-Rearing experience covers 35 yrs. Our strains of Golden-Yellow Bees unsurpassed. **HENRY ALLEY,**

19Atf WENHAM, MASS.

Mention the American Bee Journal.



OUR FIRST CATALOGUE.

Fence nine years old, "going on ten." Company six years "coming seven." Chosen by acclamation to lead the procession; it is time to discard knickerbockers and put on pantaloons. Heretofore we have had nothing but a folder circular to explain the coiled spring principle. We can now furnish the finest fence catalogue issued, with photographic views of our different styles in actual use. It will repay anyone intending to build fence, to write for a free copy.

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Orange-Blossom, Alfalfa or Sage

HONEY

For Sale Cheap.

15Dtf **C. W. Dayton, Florence, Calif.**

Mention the American Bee Journal.

READERS **Of this Journal who write to any of our advertisers, either in ordering, or asking about the Goods offered, will please state that they saw the Advertisement in this paper.**

Three queens were killed by the bees within two or three days after I received them. I examined them all, and I found three other queens balled, and no eggs in those hives. I caged them a few days, and they were received all right. Of the queens you sent me to replace the dead ones which I reported, one died in the cage the first night, and one was killed by the bees after she was liberated, which left me 19 one-frame nuclei with queens, which gathered 785 pounds of comb honey in one-pound sections, and 175 pounds of extracted, besides some unfinished sections. The best one gave me 120 well-filled one-pound sections—they were pure 3-banded Italians. Only one swarmed.

I had 22 full colonies, which made 41 all together, and my crop is 2,000 pounds of comb honey in one-pound sections, and 2,500 pounds of extracted; and I increased to 75 strong colonies, with plenty of winter stores. The honey gathered is white, being from white clover and alfalfa.

J. A. SMITH.

Heber, Utah, Oct. 9, 1894.

Our Young Friend Reports Again.

We have our bees out of the cellar, and they are in good condition. We lost 3 colonies out of 65. It is fine weather here now, and the bees are busy at elm, soft maple, and willow blossoms.

I have been very much pleased to hear from so many "boy bee-keepers," and they have done well. But don't give it up, boys and girls. Write again. The old saying, "boys should be seen and not heard," is not applicable here. As it is impossible to be seen, we ought to have a chance to be *heard*, and the American Bee Journal gives us that privilege, so let us take advantage of it. CHAS. W. SANFORD.

Ono, Wis., April 16.

Spreading Brood.

Concerning the very doubtful practice advocated by some writers called "spreading brood," Mr. Wm. Barnum suggest an article by Dr. Tinker or myself on the subject. In the climate of Kentucky, Tennessee, Virginia, including all the middle States and the entire South, no one but a misled novice in bee-culture would attempt to follow the so-called system of "spreading brood." To follow the misleading directions how to spread the brood, so often met with in the back numbers of the American Bee Journal, would necessitate doing the spreading of the brood in March and April, when the weather is dangerously capricious, and if put off late in the season, the warm, favorable weather later on would remove every reason for such manipulation.

The whole thing may be summed up thusly: It is a dangerous thing to spread the brood when it would be of any use, and useless to spread it when it is safe to do so.

Dr. Tinker is much better situated as to climate, to judge and write upon this subject than I am.

Allow me here to call attention to the fact that Mr. Doolittle, according to his "dates," is fussing with his brood, right in the middle of our early honey-flow from white clover. G. W. DEMAREE.

Christiansburg, Ky.

Bees in Virginia.

One of the severest winters ever known in the valley of Virginia is at last over. The first snow fell on Dec. 26, and 15 to 20 snows fell during the winter. The ground was coutinually covered from two to ten inches for nearly three months. The bees had only one flight from Jan. 1 to the last of February. Several times during the the winter the mercury fell 14 to 18 degrees below zero, and for days at a time lingered in that neighborhood.

I have always believed that in this climate bees would winter on the summer stands without any protection, but I must confess that I felt pretty blue and trembled

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Apr. 18.—The supply of comb honey is very light and looks as though all would be sold, unless it be some California that is being spread upon the street. Best white comb brings 14c.; dark, 8@10c. Extracted, 5½@7c., according to quality, body, flavor and package.

Beeswax, 28@30c. R. A. B. & CO.

KANSAS CITY, Mo., Apr. 18.—The demand for comb honey is light, and good for extracted. We quote: No. 1 white comb, 1-lb., 14c.; No. 2, 12@13c.; No. 1, amber, 11@12c.; No. 2, 8@10c. Extracted, 5@6½c.

Beeswax, 22@25c. C. C. C. & CO.

CINCINNATI, O., Apr. 19.—Demand is quiet for all kinds of honey, with a fair supply. We quote: Best white comb, 12@14c. Extracted 4@7c., according to quality.

Beeswax is in good demand at 25@31c. for good to choice yellow. C. F. M. & S.

CHICAGO, ILL., Mar. 18.—Demand is good for all grades of honey excepting dark comb. We quote: Fancy comb, 15c.; No. 1, 14c. Extracted, 5@6½c. J. A. L.

PHILADELPHIA, PA., Apr. 1. — Choice white clover honey is getting very scarce at 14c. Dark and poorly filled sections, 8@10c. Demand is falling off on extracted, prices ranging from 4½@7c. Strictly pure white clover very scarce at 10c. Beeswax arriving more freely and selling at 30@31c. W. A. S.

NEW YORK, N. Y., Feb. 20.—We are gradually working down our stock of comb honey, and the indications are that we will succeed in disposing of all of the white honey and possibly all of the dark during the spring, at following quotations: Fancy white, 1-lbs., 12c.; fair, 10c.; buckwheat, 8@9c. The market is well supplied with extracted honey. Demand is fair for choice grades, while common stock is neglected. We quote: White clover and basswood, 5½@6c.; buckwheat, 5@5½c.; Southern, 45@55c. per gallon, according to quality. Beeswax firm and in good demand at 30@31c. H. B. & S.

BUFFALO, N. Y., Mar. 16.—The honey market is getting quite well cleaned up here. We quote: Fancy, 13@14c.; choice, 11@12c.; buckwheat and commoner grades, 7@8c. Extracted is in very light demand here, and we would not advise shipments. B. & CO.

GLOBE BEE-VEIL

By Mail for $1.00.

A center rivet holds 5 spring-steel cross-bars like a globe to support the bobinet Veil. These button to a neat brass neck-band, holding it firmly.

It is easily put together; no trouble to put on, or take off. An absolute protection against any insect that flies. Will go over any ordinary sized hat; can be worn in bed without discomfort; fits any head; does not obstruct the vision; folds compactly, and can be carried in the pocket; in short, it is invaluable to any one whom flies bother, mosquitos bite, or bees sting.

GEORGE W. YORK & CO.,

CHICAGO, ILLS.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

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R. A. BURNETT & Co., 163 South Water Street.

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HILDRETH BROS. & SEGELKEN, 28 & 30 West Broadway.
CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.

Kansas City, Mo.

C. C. CLEMONS & Co., 423 Walnut St.

Buffalo, N. Y.

BATTERSON & Co., 167 & 169 Scott St.

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Philadelphia, Pa.

WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

for my little workers as the cold winter months crept slowly by, and no sign of life was seen about the hives—only dead bees choking the entrance. But during the last of February came two or three bright, warm days, the mercury running up to 65 degrees, and out poured the bees by the hundred, and what a joyful time they had! And now the 12th day of April is here, the buds are bursting, flowers are blooming in the weeds, and every hive is full of life.

Of 28 colonies that went in for the winter last fall, not one is dead, and all with plenty of bees and honey, and building up rapidly. I have been keeping bees about six years, and have never lost a colony from any cause whatever. My neighbors' bees die, and they wonder why mine live. I believe the whole secret is, that I see they have ample stores in the fall, and always a *good* queen. So far my largest honey-yields have always followed cold winters.

F. T. BROOKE.

Brookewood, Va., April 12.

Small Loss—Gathering Pollen.

Bees wintered fairly well. I found only 4 dead when I put them out on April 4. This is a very small loss out of 171 colonies. They are gathering pollen to-day.

J. M. DOUDNA.

Alexandria, Minn., April 11.

Long Winter and Backward Spring.

I am much pleased with the able and progressive American Bee Journal. Long may it wave. Bees are suffering considerable in this section from the long severe winter and the backward spring. S. S. BUTTS.

Wyalusing, Pa., April 13.

Let Their Bees Starve.

There are a few bees here, but no beemen, because they let them all starve the past winter. I have 26 left out of 28 last fall. SOL HARPST.

Kremis, Pa., April 22.

Half the Crop from Raspberry.

I am very much pleased with the improved Bee Journal. Its columns are read and re-read, as I am very much interested in my bees. My crop was 125 pounds per colony of extracted honey last year—one-half from raspberry, stored in drawn combs.

R. D. HORTON.

Blossburg, Pa., April 22.

Wintered Fairly Well.

Bees wintered fairly well here. I have 46 colonies in good condition. They are gathering natural pollen to-day, the first this spring. I never saw bees work on bran and ground feed as strong as they did this spring. Some of the pollen that they are gathering to-day is green. I don't know where they get it. C. C. ZINN.

Windsor, Colo., April 16.

Candied Pine Honey-Dew.

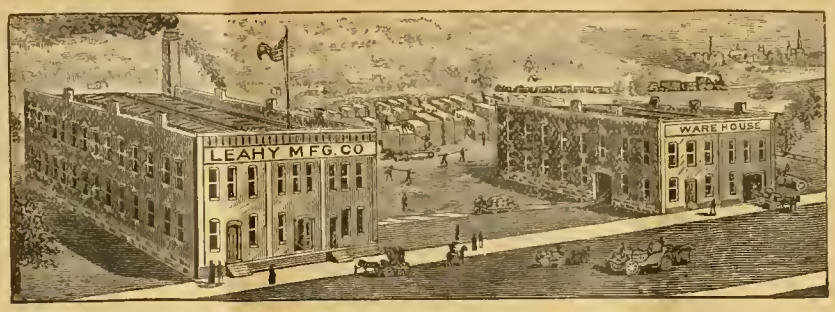
I herewith send you a small quantity of pine honey-dew. It was gathered last December. Some one has said in the Bee Journal that honey-dew never candies, but pine honey-dew always candies in the hive or out, winter or summer. The honey is about the color of basswood honey.

Wallacehurg, Ark. F. C. MORROW.

[Thank you, Mr. M., for the sample. It is candied, sure enough.—EDITOR.]

Bees in Pierce Co., Wash.

On page 226, J. R. K. desired to know how bees do in Pierce Co., Wash. I have kept bees in Pierce county for about six years. I run my bees largely for queens, and of course it interferes somewhat with my honey crop, but I would say that 50



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pounds of comb honey is an average crop here, retailing quite readily at 20 cents. White clover furnishes our only surplus, so our honey is all No. 1. C. E. P.
Tacoma, Wash.

Bees Swarming and Storing.

I have taken no honey in two years, and had to feed my bees a barrel of sugar this winter and last fall. My bees are swarming now, and gathering honey. Prospects are good for a crop. I doubled them up last fall from 80 to 40, and then had to feed.
Gibson, Miss., April 19. E. ISRAEL.

White Clover Never Looked Better.

The bees here did not do very well the past season. It was too wet in the spring, and too dry after that. They have wintered very poorly. I think the loss will be over 50 per cent. through this part of the State, some having lost all. The prospect is good for those that have any bees left. The white clover never looked better.
WINCHESTER RICKEL.
Burket, Ind., April 16.

Wintered Well Generally.

Bees in this part of Iowa did but very little last season, but from what I can learn they have as a general thing wintered well. I have 28 colonies, and the most of them are in pretty good condition. I winter mine in a cave. Success to the American Bee Journal. SAMUEL FLORY.
South English, Iowa, April 20.

Expect a Good Season.

Bees in Ontario county have wintered well, as a general thing. They are bringing in pollen to-day, which they are in need of very much. I never saw as little in the hives at this time of the year. We are expecting a good season this year, and don't want to be disappointed. H. L. CASE.
Bristol Centre, N. Y., April 18.

He Takes a Front Seat.

I see on page 240 a man claims the championship as the oldest bee-keeper. He will have to take a back seat for me. I commenced keeping bees July 20, 1822, and am at it yet. I have 200 colonies in my care to-day in good condition, and I am able to do as good a day's work as any man. I have worked hard ever since I was old enough to work. I have followed painting 60 years. I spend the bee-season with my bees. They are the first consideration. The rest of my time I work at the painting business. I keep a good foreman—my son—who is a fine workman. He is 40 years old. I have two sons and one son-in-law that are good workmen, and we work together. I am strictly temperate, try to be strictly moral, go to bed regularly at 8 o'clock, and get up at 4 in the summer, and 5 in winter; pay 100 cents on a dollar, eat, drink, and be merry, do unto others as I would have others do unto me, and weigh 195 pounds, standing 5 feet 11½ inches in my stockings. That is how I am to-day.
SENECA T. CRANDALL.
Hartford City, Wis., April 15.

Bee-Keeping in Kansas.

Our bees went through the winter on the summer stands without loss. I lost a couple of colonies during our March blizzard, probably due to moving our apiary some half mile for better accommodations, as it had quite outgrown our old quarters. This is, taken all in all, as good a bee and honey country as I have ever seen. Where three years ago we secured our start in bees for our proposed apiary, there were no bees nearer than 50 miles, and to-day I dare say that, except our own, there are not more than 50 colonies within that radius. I have not seen a bee-moth in two years, and never but two since we started in the bee-business, and those two came in some nuclei that were shipped to us from Iowa, and I at once caught and killed them—the moths, not the nuclei.

There are certain disadvantages peculiar, probably, to this section that annoy and perplex the apiarist, among which are our *very* sudden and radical changes of weather—violent storms of wind, rain and hail; also our hot, dry winds of midsummer, that wrench, burn and dry everything completely. We would not like to risk trying to produce bees and honey outside of our irrigated region. The ditch water appears to be our salvation. Under the ditch two crops of alfalfa each year are grown for seed successfully, and when grown for seed it is a great source of honey, of very superior quality—equal to, and probably superior, to white clover. Mr. Alley says that he never "tasted" any better honey than our "unripe alfalfa honey," or honey from alfalfa extracted before it has been sealed by the bees. If we wait until it is sealed we do not find it practical, or hardly possible, to use the extractor. Honey gets ripe very quickly in our hot, dry summer weather. JAMES H. WING.
Syracuse, Kan., April 15.

Bees Were Kept in Too Long.

Many lost their bees here the past winter. I believe they were kept in too long. We lost a few colonies. G. G. DEXTER.
S. Alabama, N. Y., April 14.

Small Loss in Wintering.

I think the Bee Journal better than ever. I have 72 colonies out of 76. All were wintered on the summer stands.
M. BEAUPRE.
Forestville, Ont., April 22.

Good Colonies Get Lighter in Winter.

On page 87, this question is asked: "If a good strong colony of bees is put into the cellar, as a general rule does it get lighter?" I should say yes, invariably. I set scales at the foot of the cellar stairs, and weigh each hive when carried in, and weigh again as I carry them out, and the loss in weight is all the way from 4 or 5 pounds to 20 or 22 pounds. Why is there such a difference in loss of weight, wintered in the same cellar, carried in at the same time, and carried out at the same time? I cannot say how it would be out-doors, as I never tried wintering bees out-doors. I keep 100 colonies.
Marshalltown, Iowa. O. B. BARROWS.

Bees for Pleasure.

My 6 colonies of bees are all right. They are a great pleasure for me.
(REV.) J. NEWMAN.
Ann Arbor, Mich., April 15.

Tin Separators.

To use tin separators, and not have the comb honey so much travel-stained, dip them in hot melted beeswax; and so they will not be so cold, have them perforated.
H. V.

Poor Prospects for Honey.

The prospect for honey is poor this year, as our country is overstocked with bees raging with foul brood. S. M. CARLZEN.
Montclair, Colo., April 15.

Bee-Keeping in Tennessee.

I have examined my bees to-day, and found them in good condition. They are gathering pollen and honey from the oaks, apple-bloom and red bud.

On page 95 I mentioned some colonies retaining their drones in winter quarters in 1894. Mr. Wilcox wanted me to report the condition of these colonies. They are in extra-good condition, and have good queens. The hives are full of bees, and the combs about full of brood. Some of them are storing honey in the sections. If this isn't extra condition I don't know what is, for this time of the year, considering the hard winter. It is early to cut bee-trees. A neighbor of mine cut one the other day, saved the bees, and got two water buckets full of honey.

I have been traveling some lately. I saw some bee-keepers with 1 to 16 colonies in logs or box-hives. Some say they wouldn't have any other kind. I took dinner at one man's house who had 6 colonies of bees—"the regular fighters," so he said. My partner wanted to sell him some hives and queens. He asked the price of the queens, and was told $1.00. He said that he would behanged if he would ever give a dollar for one bee. He said that he had tried all kinds of hives, but none suited him as well as the ones that he had on hand. They were hollow logs, about 2½ feet long, set on flat rocks on a hillside. The cover over them was the head of hives.

The prospect for a honey crop this year is good, if it doesn't rain too much in the next month.

I have a honey wheelbarrow to carry the combs to the honey-house and back to the hives. It has a box that holds 18 frames of combs, and a tool box on the front end to carry knives and other things. I made the wheelbarrow myself. When I need anything I make it. I have a section-holder and a foundation fastener of my own construction. There is nothing like being handy, so that if you need anything you can make, you can save buying it. I don't buy any bee-supplies except sections or comb foundation. A. C. BABB.
Greenville, Tenn., April 19.

Langstroth ON THE Honey-Bee

—REVISED BY THE DADANTS—

This magnificent classic in bee-literature has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, and is substantially bound in cloth.

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Convention Notices.

ILLINOIS.—The spring meeting of the Northern Illinois Bee-Keepers' Association will be held at the residence of H. W. Lee, in Pecatonica, May 21, 1895. It will be held one week later if it is a stormy day.
New Milford, Ill. B. KENNEDY, Sec.

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Is guaranteed to cure Piles and Constipation, or money refunded. 50 cents per box. Send two stamps for circular and free Sample to MARTIN RUDY, Registered Pharmacist, Lancaster, Pa. NO POSTALS ANSWERED. For sale by all first-class druggists everywhere. Peter Van Schaack & Sons, Robt. Stevenson & Co., Morrison, Plummer & Co., and Lord, Owen & Co., Wholesale Agents, Chicago, Ills.
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This department is only for your "Wants" or bona-fide "Exchanges," and such will be inserted here **at 10 cents a line** for each time, when specially ordered into this department. Exchanges for cash or for price-lists, or notices offering articles for sale, will not be inserted here—such belong in the regular advertising columns, at regular rates.

TO EXCHANGE—Silver-Spangle Hamburgs for Golden-Spangle Hamburgs.
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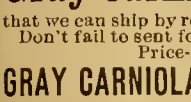

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Notice to Bee-Keepers & Dealers.

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Doctor, 3½ in., Largest Smoker made...	$1.75
Conqueror, 3-inch stove.....	1.50
Large, 2½-inch stove.	1.00
Plain Standard, 2-inch stove	.70
Little Wonder, 1¾-inch stove.....	.50
Bingham & Hetherington Honey-Knife.	.80

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200 Colonies of **ITALIAN & HYBRID BEES** in 8-frame Langstroth Hives. Italians, $5.00; Hybrids, $4.50—delivered at the depot in Jefferson free of charge. Also **a lot of Bee-Supplies.**

Mrs. C. Grimm, Jefferson, Wis.

18A2 *Mention the American Bee Journal.*

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Cold Cellar for Bees in Winter —What to Do With It.

Query 970.—My cellar sometimes runs down to freezing. 1. What is best to do? 2. If fires are kept in the cellar, at what temperature are they unnecessary?—Wisconsin.

Mrs. L. Harrison—1. Warm it. 2. 40°.

E. France—I don't know. I winter all out-doors.

Wm. M. Barnum—If it is *dry*, let it and the bees alone.

B. Taylor—1. Make your cellar warmer. 2. 38° and upward.

W. G. Larrabee—I have had no experience with cellar-wintering.

Prof. A. J. Cook—Just keep a slight coal fire so as to keep it to 45°, Fahr.

Mrs. J. N. Heater—45° above is a good temperature to keep your cellar.

Dr. C. C. Miller—1. Put in a hard coal fire. 2. When the cellar stays above 40° without fire.

J. E. Pond—I never wintered bees except on the summer stands, so I have no experience in the matter.

Rev. M. Mahin—My little experience with bees in the cellar does not warrant the expression of an opinion.

J. P. H. Brown—In my climate we winter bees out-of-doors; but I would say, keep your cellar at about 45°.

G. M. Doolittle—For the most perfect wintering the temperature of the cellar should be kept between 40° and 45°.

Rev. Emerson T. Abbott—I do not know anything about cellar-wintering. Bees do not need a fire. They do not *freeze*, they *starve*.

J. A. Green—1. I have had little experience with fires in bee-cellars. 2. If I were to have any, I would not want the temperature to go below 45°.

H. D. Cutting—When it goes to 36° I light a lamp in the cellar and bring it up to 38°. I prefer 38° to 40° in a dry cellar; 40° to 45° in a damp cellar.

R. L. Taylor—1. Bank up your cellar so as to keep out the cold better. 2. I should let the temperature run down to 35°, Fahr., for short periods of time rather than resort to fires.

Eugene Secor—A cellar that freezes is a bad place for bees unless it is very dry. 1. I would try to keep it from freezing, and if necessary use artificial warmth. 2. At 40° or above.

Chas. Dadant & Son—If you put plenty of bees in your cellar they will keep up the heat. The temperature that winters the bees best is 40° to 45°. Better have it a little cold at times than too warm.

C. H. Dibbern—Better fix the cellar so it will be warmer. Fires should only be resorted to when the freezing point is reached, and the temperature should not be raised much over 45°. The fire should not be allowed to light up the cellar much, or many bees will fly and get lost.

Jas. A. Stone—1. There must be an air-hole that lets the warm air ascend—if so, stop it. 2. Any where above freezing. I have a neighbor who has a double wall to his cellar—and still it freezes, and he wondered how it happened. He has a fire-place in it, with open chimney. As nature will have it, the warm air ascends and the cold air descends, consequently the result.

P. H. Elwood—Keep fire if you will attend to it, and do not let the cellar get either too hot or too cold. You will find it close work. The temperature depends something on how freely your hives are ventilated. With top ventilation the temperature can go a little higher. Give them a temperature at which they will keep quiet.

G. W. Demarree—My experiments published in the Bee Journal some years ago, showed that to heat up the apartment in which the bees are kept in the winter, for six or eight hours, once a week, will restore the bees to healthy condition if there is provided thorough "upward ventilation" to each hive, during the time the heating-up process is going on.

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Globe Bee Veil

By Mail for One Dollar.

Five cross-bars are rivited in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through.

It is easily put together and folds compactly in a case, 1x6x7 inches, the whole weighing but 5 ounces. It can be worn over an ordinary hat; fits any head; does not obstruct the vision, and can be worn in bed without discomfort. It is a boon to any one whom flies bother, mosquitos bite, or bees sting.

☞ This Veil we club with the Bee Journal for one year—both for $1.75; or give free as a Premium for sending us 3 New Subscribers to the Bee Journal at $1.00 each.

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Comb Foundation. I have several hundred pounds of choice wax which I will sell made up into Medium Brood and Thin Surplus Foundation at 40c. and 50c. per pound respectively until all is ordered. Order at once if wanted. **J. J. ANGUS.** PLYMOUTH, WIS

18A4 *Mention the American Bee Journal*

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GOLDEN QUEENS

From Texas. My Bees are bred **For Business,** as well as for **Beauty** and **Gentleness.**

☞ Safe arrival and reasonable satisfaction guaranteed. Write for Price-List.

Untested, $1.00—Tested, $1.50.

J. D. GIVENS, LISBON, Box 3 **TEX.**

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TO SAY to the readers of the BEE JOURNAL that

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One Colony of Italians on 9 Gallup frames, in light shipping-box	$7 00
Five Colonies.....	30 00
Ten Colonies.....	50 00
1 untested queen.	1 00
6 " queens	5 50
12 " "	10 00
1 tested Queen...	$1 50
3 " Queens.	4 00
1 select tested queen	2 00
3 " " Queens	5 00
Select tested queen, previous season's rearing	4 00
Extra Selected for breeding, THE VERY BEST..	8 00

About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.

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Where you can buy **Queens,** as good as the best—Warranted Purely Mated, and guaranteed free from Paralysis. From either an Imported or a Straght 5-B. or Golden Mother—75 cents each; 12 for $7.50. Tested, $1.00 each; 12 for $9.00. After June 1st, 50 cents each; 12 for $4.00; Tested, 75 cents each, 12, $7.50.

Good Breeders, $2.00 each; Straight 5-B. or "Faultless" Queens, $2.50 each. **Bees,** 75c. per lb. Circular Free. Address,

HUFSTEDLER BROS.

10A26 CLARKSVILLE, TEX.

Mention the American Bee Journal.

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35th Year. CHICAGO, ILL., MAY 16, 1895. No. 20.

Contributed Articles.

On Important Apiarian Subjects.

Something on the Prevention of Swarming.

BY C. DAVENPORT.

I believe the majority of bee-keepers, especially in the North, favor natural swarming. They claim better results can be obtained by allowing each colony to swarm once. I am very glad to say that I cannot agree with them, not that I like to disagree, for I do not, but I am glad that I can obtain as good, or better, results without allowing natural swarming, and thus save a great deal of hard work in chasing and climbing after swarms. I have had all the natural swarming I want on a large scale. I practiced this for a number of years when I run only one yard, and in and near this yard were a great many large trees in which many swarms would alight in such high and inaccessible places that no swarm-catcher that ever was or ever can be made would secure them. But now we have queen-traps and swarm guards which are a great help, although they do not work as well as some might infer from reading about them, especially in large yards, for when the traps or guards are used swarms will sometimes alight and mix up, and occasionally two or three will go, or try to go, into one hive, and if there are any extra queens around, virgin or otherwise, swarms will sometimes accept one of these, and pull for the woods. I have lost a few swarms this way, and it was a great mystery to me why they left, when I had their queens trapped. I never knew the reason until recently, when Hon. R. L. Taylor explained the mystery in a late number of the Review, saying that a swarm will accept, in the absence of its own queen, any other laying queen, and less readily a virgin queen. In a large apiary there are apt to be some of the latter around that have been driven from the hives; this is more apt to be the case if there are many box-hives in the yard.

Sespe Apiary, owned by Mr. J. F. McIntyre, at Fillmore, Calif.—Looking Westward.

I notice there is considerable favorable comment being made on the plan of keeping colonies in box-hives for breeders, allowing them to swarm, then put the swarms into shallow hives, and run and depend on them for surplus. I have had some colonies in box-hives, both large and small, and run them on this plan for over ten years. One time I had over 50

colonies in box-hives. A very long article could be written about the disadvantages of this plan. I would advise those thinking of trying it, to try it in a small way at first, and if you get large returns from it for a year or two, do not get excited. In keeping bees in box-hives a great deal depends upon luck. You have not much control of the business. It was hard luck for bees in box-hives around here the past winter—the loss will average fully 50 per cent. This was on account of honey-dew that was gathered last fall. Of course this does not happen every year, but my experience has been that, taking a series or years, there is more profit in a frame hive of some kind.

I promised in my last to say something about swarming. From what some write, although I do not think they mean that, it would be easy to infer that the bees that swarmed the most were the best. Some of the most worthless bees I have ever had, as far as surplus honey was concerned, were great swarmers. Of course the queens were prolific, and the bees good honey-gatherers; but most of what they got was used to rear more bees.

A good many seem to think we cannot do anything to breed out the swarming trait; or, if we do, the bees will not be as good. My opinion is that we can do a good deal to breed out the swarming trait, and in doing so also secure a better strain of bees. As long as we cannot control the mating of queens, it will be slow work, but I feel confident that I have done coosiderable in this line in the last few years.

I will now give the plan of dividing, or artificial swarming, that I have practiced for a number of years with all colonies in single brood-story hives, by which I can secure more white honey in sections than by natural swarming, or any other plan I have ever tried, and I have tried a good many.

First, perhaps I should say that when there is no honey to be had in the fields, and bees are fed to enable them to keep brood-rearing up, they do not contract the swarming-fever as soon as they do if they are securing their supply from natural sources. Why this is, I do not know, unless the prospect does not look as bright when they have to take their supply from a feeder.

In this locality, as a general thing, bees do not get the swarming-fever before the beginning of the white honey harvest. Some of them will, but by taking frames of brood from them and exchanging them with some from a weak colony, all can be held back until clover or basswood begins to yield, and at this time, if they prepare to swarm, all the brood is taken from them, and they are given empty frames with only narrow starters of foundation. The sections are put on them, or very soon after. As soon as comb is built below, the queen fills it with eggs, so that the honey has to be stored in the sections. Removing the brood in this way cures the swarming-fever at once, and they go to work with all the vim and energy they would if they had been allowed to idle around five or six days and then swarm themselves.

From strong colonies that do not get the swarming-fever at the commencement of the flow, the two middle combs are removed, and two empty ones put in their place; then the two outside ones are put next to these. Colonies thus treated are not apt to swarm, if they have not the swarming-fever at the commencement of the main flow. Some years it is necessary to remove but very little brood. In this way, last year, less than half of my colonies tried to swarm, and nothing was done to prevent them, except to put the two outside combs in the centre.

The brood that is removed is used in various ways. If there are any weak colonies at this time, they are built up. Each year I rear a good many queens from some of my choice stock, and a good deal of it is used to form nuclei, etc. What is left, is put in 8-frame hives; two of these are put together, one on top of the other, and if they are given a queen soon after, they make strong colonies for the fall flow, if there is any. I leave but a very few bees on these frames of brood. There is always some honey on them, and the hatching bees will take care of themselves. Some of the larvæ will die, but this is a very small loss at this time.

By this plan there are no after-swarms. Some of the old colonies may try to swarm, but this is seldom. But I am always glad to have them, for it is a good season when they do, and if any of them do get the swarming-fever again, the same process is repeated.

From reading this, you may think my plan is more work than to allow them to swarm; but in actual practice it is not one-half the work. Besides, I can go through the swarming season with less increase. One of the main things with me is to prevent increase. There is no sale for bees here, and I have enough colonies in the spring for each yard to gather all there is to be had from the same. In fact, I think I have had too many, the way the seasons have been the last few years. But in following this plan, if one desires increase, three or four frames of brood can be put into a hive, and as soon as the bees begin to hatch, by giving them a laying queen, we can have a strong colony for winter. In this way we can, if we have say 10 colonies in the spring, increase them to 30 for winter; and in this locality the 10 old colonies will gather from 50 to 150 pounds of surplus each. Of course, if it was a poor season those young colonies would have to be fed some, and we would have to give them full sheets of foundation in brood-frames. One year I increased an out-yard of 40 colonies to 130, and secured about 150 pounds of choice white comb honey from each of the old colonies; but I had to do considerable feeding to get all the young colonies in good condition for winter.

Now I will tell something that is very simple, and perhaps many have found it out for themselves, but I handled bees quite awhile before I thought of it. Such of you as have not known it, will, if you try it, find it will save you a good deal of hard work. It is this:

If you wish to know if a colony is preparing to swarm by building queen-cells, or if you wish to cut out cells from a colony that has swarmed, instead of taking out each frame, set the hive up on end, and kneel down in front of it. Most of the cells are on the bottom of the combs. You can drive the bees back with a very little smoke, and easily see two-thirds of the way up between the combs. It is very seldom that a queen-cell is further up than this. If one is, you can see it by looking down from the top. If you wish to cut them out, you can do it in this way with less than one-fourth the the work and time when taking out each frame; and, also make a sure job of it, for in handling the frames the bees, unless we brush or shake them off, are in our way, especially on the bottoms of the combs where most of the cells are. This plan also disturbs the bees less. Any one with a little practice can, in a hive with frames not deeper than the standard, and having a narrow bottom-bar, tell for a certainty whether there is a queen-cell or not, without removing a frame. This cannot be done with loose frames, unless they are held by spacing strips.

Southern Minnesota.

Chaff Hives and Out-Door Wintering.

BY J. P. SMITH.

But a few years ago I used none but single-walled hives. At length I procured two or three chaff hives. They proved so satisfactory that I increased their number from time to time, so that at the present time I have a majority of them, or which is the same thing, an outer case over a single-walled hive.

My outer cases are cut away in front, making a sort of portico, so that the bees alight just as near their combs as they do in single-walled hives, so they have no extra crawling to do. I have observed very carefully in regard to their work. I have been unable to see any difference in regard to their work, either in swarming or collecting honey. But I do find a difference in my work in caring for them.

I winter my bees on the summer stands. I let the outside case remain on summer and winter. I do not remove the chaff unless it becomes damp. In the fall, when preparing for winter, when I come to a chaff hive all I have to do is to pass right along by it, marking in my memorandum, "Packed for winter." When I come to a single-walled hive, I have to hunt up an outer-case, adjust it, procure the packing and pack it. Under this management my bees are protected through the cold, changeable weather of spring and fall.

For the last three years I have wintered without loss, except one or two colonies that became queenless. Neither have my bees suffered from spring dwindling. I have just now (my fourth experimental year) been examining my bees. I take out every frame, so that I know just the condition of each colony. In my examinations I assist them in "house-cleaning," in every way possible.

In preparing my bees last fall for winter, I made sure that every colony had 30 pounds of stores and plenty of bees. In case my colony had short of 30 pounds, I made up the deficiency by feeding sugar syrup (not percolated). Prepared in this way, and packed as above, I have again wintered my bees without loss. I prepared 26 colonies, and have at this date 26 colonies, all good and strong. Isn't this a pretty good record for latitude 43½°, on the bleak hills of New Hampshire?

Sunapee, N. H., April 22.

Ten weeks for ten cents. See page 316.

What I Know About Swarming.

BY ADRIAN GETAZ.

Some time ago a query was printed in this journal asking the causes of bees swarming. Nearly all answered, "Dissatisfaction." A few added, "Caused by lack of room," etc. But admitting that dissatisfaction is the cause, and this seems to be almost incontestable, it would yet be in order to find how the dissatisfaction is brought about.

Some of our ablest writers have said that swarming is a provision of "Nature," to multiply and increase the bees, and that it is as impossible to prevent the bees from swarming as it is to prevent young people marrying. The funniest part of it is that the "leading apiarist," who advocates that theory, has himself an out-apiary run for extracted honey, and where his bees do not swarm at all, or nearly so! Nevertheless, his theory is true to the extent that swarming is unquestionably the means of multiplying and increasing the number of bees in the world; but it would be wrong to say that bees do necessarily swarm every spring under any and all circumstances. In fact, if we knew exactly what condtions provoke and cause swarming, we would be able to prevent it without damaging our bees or our honey crop.

The Dadants say emphatically that the chief cause of swarming is the lack of room for the queen to deposit her eggs, or for the bees to store their honey, and it must be admitted that the facts sustain their position. Remember, here, that the lack of room does not mean only a hive too small, but the lack of empty combs. In working for extracted honey, in a well-organized apiary, empty combs can always be provided, but not so where comb honey is the object in view.

Sometimes bees will swarm because their hive is entirely too small, or so hot as to be uncomfortable, or some other reason of that sort. Such cases I should call "absconding," and will not be considered in this contribution. I am speaking of bees under normal circumstances, and supposed to be properly attended. Like all my other contributions, this is written by a comb-honey producer, and from that standpoint.

It does not seem to me that the lack of room causes the swarming, or rather the dissatisfaction, which eventually prompts the bees to swarm out, (I repeat here that the extreme cases, or rather the absconding cases, are not considered), for the following reasons:

First, bees have frequently been known to be very crowded and not swarm, even to the extent of building combs under the portico, under the hive (when it is high enough from the ground), or simply attached to the outside of the hives if this is protected, as it is ordinarily the case in several European countries. Second, bees never swarm (barring the absconding cases) without having built queen-cells, and hardly ever before, at least some of the queen-cells are capped or very advanced. Third, swarming frequently occurs when queens are superseded, even when there is abundant room. All this seem to me conclusive proof that the presence of the queen-cells is the true cause of swarming, or rather dissatisfaction. We all know the antipathy between queens, and even between queens and queen-cells, if that expression can be used; how excited the queen becomes in the presence of the cells; how the bees try to protect the cells; and how the excitement grows from day to day until swarming finally occurs.

Several times the opinion has been advanced that the young bees were the ones getting dissatisfied when the lack of room prevented them from carrying on the work of brood-rearing, and using the food they were preparing in abundance. That theory was very strongly advocated a few years ago by Messrs. Hasty and Stachelhausen. I was very much impressed by it, but I cannot admit that the young bees which have hardly been out of the hive yet, should be the ones to insist upon emigration. Nor is it in the nature of young beings (whether bees or human) to be dissatisfied. Dissatisfaction is rather a production of old age.

Lately, I have thought a good deal on the subject, and finally came to the conclusion, that if the young bees are not the ones to start the dissatisfation, they certainly are the ones to start the queen-cells, not with the purpose to swarm, but simply because the queen and the brood cannot consume all the food they prepare. As long as the brood gives them all they can do, they attend to it. When, by lack of space or the failing of the queen to lay a sufficient number of eggs, they have a surplus of larval food, they build some cell-cups to store it. As the space, or rather the empty cells get scarce, the queen is eventually compelled to lay eggs in these cups. Then the cell-building and queen-rearing naturally follow. I suppose mere cups are not noticed by the queen, but when the cells are pretty far advanced, she realizes that rivals will soon be on hand. She becomes excited and "dissatisfied." The bees become "excited and dissatisfied," too, and more and more until all have the "swarming fever." Finally, the first swarm issues. This destroys the swarming-fever and restores "satisfaction" so far as the swarm is concerned, but probably not, or at least not entirely, in the mother colony. Before the "fever" is over, another queen issues in the presence of queen-cells, or perhaps other queens piping in their cells, and the "racket" goes on again, until the swarming is at an end.

So as far as I can see under our present knowledge, I should say that the swarming is a succession of events. First, the lack of space, or rather empty cells, prevents the queen from laying a sufficient number of eggs. Then the young bees, having more larval food "on hand" than the queen and brood can consume, begin cell-cups to store it. Eventually, as the space gets scarce, eggs are deposited in these cups and queens reared. By the by, the queen gets excited by the presence of the cells. The excitement and dissatisfaction are communicated to the bees, which finally swarm out, taking away the queen with them. I don't think that the queen leads, or even starts the swarm herself. What she wants, is to destroy the queen-cells. But when the tumult of swarming occurs, she goes out with the rest.

Now that I have told what "I know" on the subject, let Dr. Miller tell us what he "don't know," and we will be pretty well posted on this matter. Knoxville, Tenn.

The Southeastern Kansas Convention.

BY J. C. BALCH.

The Southeastern Kansas Bee-Keepers' Association met in Bronson, Kans., March 16, 1895. The meeting was called to order by Pres. J. P. Ralston, and the minutes of last meeting were read and approved. The President appointed a committee on programme, consisting of W. J. Price, W. H. Burkey, and A. Garber.

At the proper time the committee on programme reported the following questions, which were discussed:

IMPROVING NATIVE BEES.

What is the best plan to improve colonies of native bees? And when the best time?

W. J. Price said the best time was at the earliest opportunity when the weather was favorable, and the best plan is to Italianize.

J. C. Balch said there were several ways to improve the native bees, by the infusion of new blood from the different races of bees, of which he thinks the Italians are the best. The bee-keeper can send to a breeder and get a good Italian queen to rear queens from. While he will get the most of his young queens mismated, the progeny will be an improvement on the native bees; or, if he wants to have the pure Italians, he can order a queen for each colony, if he has more money than time, and has not too many bees to begin with.

J. P. Ralston thinks that with the same labor, time and energy given to the native bee that has been given to the Italian, the native bees would develop as many good traits as their Italian sisters.

C. C. Thompson would get a good Italian queen and rear the queens to improve his black bees, and if they are mismated, all right—for he thinks hybrid bees are more industrious, gather more honey, can sting harder, and can get in more business to the square inch than the pure stock of either race.

FEEDING BEES IN THE SPRING.

Will it pay to feed bees in the spring?

C. C. Thompson—If they are hungry, yes. If they have plenty of stores, no. It will not pay to feed bees that have plenty of stores, in this part of the United States in the early spring, to stimulate them to brood-rearing. Why? Because they begin brood-rearing too soon anyway. The soft maple blooms here in February and the first of March. From that they gather pollen, and as soon as they get a little new pollen they begin brood-rearing in earnest, and they use up their honey, feeding young bees, before there are any flowers to gather any more from.

J. C. Balch said brood-rearing usually begins about the middle of February, and if the weather is warm through March they breed up very fast, because the feed is all in the hive, except what pollen they get from maple, box-elder and Easter flowers in March and April. Fruit-blooms come about the first of May, then from apple, peach, plum, cherry, etc., if they bloom freely, they gather considerable honey to tide them over until the general honey-flow begins, about the first of June. But it often happens that the most of the fruit-bloom is killed, and there is no huney to gather, or if it is not, there comes a week or ten days of cold rain from the first to

the middle of May, and the bees cannot get out of the hive. As a consequence, they get but little honey from fruit-blooms. Then the strongest colonies are the most likely to die of starvation, because they have a hive full of brood and no honey. They must be fed or they will die, and that in a very short time. It is a very good idea to examine every colony the first warm spell in March, mark the weak ones so you can tell them, and feed at once. Also mark the strong ones that have the most brood and but little honey, and feed them as soon as they need it, and before they are out of honey.

ITALIANS VS. NATIVE BEES.

In what way are Italians better than native bees?

W. J. Price says they are a little larger and stronger; gather more honey, and go farther after it. Also, they are handled more easily.

J. P. Ralston doubts if the Italians will gather any more honey than the natives, but are more quiet and easier to handle. He thinks a cross between the two races are the best honey-producers.

W. J. Price here wanted to know then why a cross between a shorthorn and a Texan would not produce a better class of cattle than either race. He believes in pure stock—the purer the better.

J. C. Balch thinks the Italians are the best; they stick to the combs better while being handled, are not so cross, and then they are the best "moth-traps" you can get. While there is a pint of bees of the Italian race in the hive, the moth has no business there, and if it goes there it can't stay—the house isn't big enough to hold the two families!

C. C. Thompson thinks the Italians are the best, but that some breeders in breeding for very yellow bees have lost sight of the object of the general bee-keeper. With him, it is more a matter of honey than color. He thinks that some of the darker-colored Italians are better honey-gatherers than the very yellow ones, and that the hybrid, or a cross between the Italian and the native, is the bee for business. He says they are always ready for business—at both ends. He imagines they are like a mule—they will both kick and bite.

REARING QUEENS "ARTIFICIALLY."

Ought any one who handles bees to be satisfied until he can rear queens "artificially?"

All thought that every one who handles bees to any extent should be able to rear as good queens as he could buy, and in many cases really better ones; but the man who has a few colonies can buy what queens he will need cheaper, perhaps, than he could rear them.

COMB OR EXTRACTED HONEY—WHICH?

Which is the more profitable, comb or extracted honey?

That is largely a question of circumstances and location. In some locations and seasons comb honey would be the most profitable, but taking it altogether, the extracted will be the more profitable, for when there is a small honey-flow, and you have the extracting-combs, the bees have no comb to build, and they can spend their whole time gathering the honey; when, if they had to build the comb, they would get but little honey, and perhaps not get that in a marketable condition.

The election of officers resulted as follows:

President, J. P. Ralston, of Uniontown; 1st Vice-Pres., C. C. Thompson; 2nd Vice-Pres., R. Garber; 3rd Vice-Pres., J. C. Wilson; Treasurer, Mrs. M. Thompson; and Secretary, J. C. Balch, of Bronson.

The President then appointed a committee on programme for the June meeting, consisting of R. Garber, J. C. Balch, and C. C. Thompson.

The convention adjourned to meet in Fort Scott, Kans., on June 6, 1895. J. C. BALCH, *Sec.*

Air-Space Over Frames in Winter, Etc.

BY W. W. M'NEAL.

While so much is being said of late about hives and hive manipulation, I would like if some one would explain to me the advantages of an air-space over the frames during the winter season. My experience has never shown wherein the bees are benefited thereby; especially if such air-space is allowed under absorbent cushions.

To the extent of my knowledge of the facts in this matter, I consider it a positive detriment to the welfare of the bees, The principle which the theory provides is wholly lost, or nearly so, in the application of that other theory which says that dampness is best counteracted by upward ventilation of the hive. Even granting that the principle is complete within itself, what positive proof is there that the separate divisions of the main cluster ever make use of it during severe freezing weather? I think I have good proof that they do not, if a division or two can be taken as proof, when found dead; no honey being within their reach.

Now when a thaw sets in, and any individual bee wishes to change her position to some other space between the combs, it is the downward course likewise then that she takes and not the upward. If the bee-space is a means so reliable towards the saving of the life of any part of the colony, why is it they sometimes starve when within two or three inches of a *central* passage-way through the combs? When the cover is sealed down perfectly tight, not only to the top edges of the hive-body, but to the top of the frames also, the small clusters forming the whole can accommodate their comfort by moving to a higher or a lower plane on the surface of the comb; and that is the embodiment of all the old way contains, which to me appears to be the true principle of wintering. If such be not so, why is it that when a colony has become fully established in the old-fashioned box-hive, or in an old barrel, wholly unprotected from without, and the bottom of the hive wide open, it comes up in a manner so pleasing as to generally cool the ardor of one whose hopes are centered in the neatly-painted modern hive?

The large deep combs, with plenty of well-ripened honey in each directly over the cluster, and being tight-fitting in the hive, forms a more perfect barrier against the encroachments of cold and frost than the hive-wall itself. Such hives cost very little time and money in their construction; and the care required of them after being occupied by the bees is trifling in the extreme when compared with that of the orthodox—the 8-frame Langstroth. When these "fearfully cumbersome hives" are run in connection with the half-depth brood-chamber hive, they form a system of management not so crude as one might imagine. The swarms that issue from them are monstrous ones, and, when hived on the shallow frame, will plant a consoling smile on the face of the bee-keeper, where possible for bees to do so, if the queen-excluder has been brought into service. Should the bees show no inclination to swarm to suit the taste of the apiarist, it is no great task to drive them out if a Crane or Bingham smoker is used, and the new hive is placed on the old stand.

The results are not so widely different always by reason of the style of hive used, but more frequently by not adopting a mode of management suited to its construction. Now should this disclose the secret of my trouble with the air-space, will some one be kind enough to point out the means of reaping some practical good, at least, from that which to me seems only a traditional sort of feature of the frame-hive, for the winter protection of the bees?

CLIPPING TO DELAY SWARMING.

Before closing, I will say, for reasons on page 168, I offered no solution of the seeming fact that clipping the queens' wings as there described is superior to the common way of doing it, because I do not exactly understand the philosophy of it myself. I only know, from an experience with such running through a course of three years, on quite an extended scale, that it did delay swarming in every case for about one week's time. Now keeping the fever in check a few days sometimes means a big thing; but the mere holding of a swarm after they have made up their minds to do so is a huge mistake if honey is the object sought. When time permits a more critical test, there may be found nothing in the method of real value.

HOW BEES CONVEY INTELLIGENCE.

Whether it is by the wings, or the sense of smell, bees convey any intellegence I cannot declare; but I *think* it is by the means of both. The different notes they produce would seem to be an expression of their approval or disapproval of certain things. When a bee returns to its hive, cold and tired, and is greeted by the happy sound within—or perhaps it is the warm air issuing from the entrance—it manifests its delight by fanning the wings for some little time before entering the hive. Then, on the other hand, bees communicate pretty much after the fashion of ants; and I also *think* that upon the utterance of a particular sound they accompany it with a peculiar odor, or scent, perceptible to them, but not always so to us. Virgin queens often call to each other, or to something by means of "piping," but that the wings are all that is brought into action is not yet clear to me. I have "whistled" swarms out by imitating the call of the queen; so in those cases it was through the aid of sound alone the communcation was given.

Just prior to the issuing of a swarm, there may be seen running about the hive over the combs and over the backs of the other bees a very small proportion at first—probably a retinue of the "queen's attendants"—producing a zeeping sound unlike any other I ever heard, not excepting the warning of the guards at night when a moth alights among them. So my only deduction is that when the queen is deprived of the use of her wings entirely, she is cut off from one means of communication, which may be all there is in it.

Had our friend, the "Gleaner," "given me the slightest hint" as to what constitutes *the best* foundation fastener, I should have tried to answer his question, on page 205.

Wheelersburg, Ohio.

Report of the Venango County Convention.

BY C. S. PIZER.

The second annual convention of the Venango County Bee-Keepers' Association met in Franklin, Pa., Jan. 28, 1895. A goodly number of the apiarists of Venango and adjoining counties were present. Deputy Mayor I. H. Borland delivered the address of welcome, at the conclusion of which President R. D. Reynolds delivered his annual address.

1st topic—"Spring Management of Bees," by T. C. Kelley. He said it should begin in the fall, at which time the bees should have sufficient stores to carry them through, and should there come a scarcity of nectar from inclemency of the weather, or from any cause, during the height of the breeding season, they should be watched closely, as their stores at that season would disappear very fast, and to avoid starvation, honey, or syrup made of sugar, should be fed. He also laid much stress on the kind of hive. He exhibited one of his choice, and invention, with frames 12½x12½ inches, placed in brood-chambers suspended at an angle of 45 degrees, with sections on the two upper oblique sides.

2nd topic—"How to Best Improve Bees for Business." This brought forth a general discussion, with an agreement that careful selection of queens and drones—drones to be of a different strain from the queens—was the key to improvement.

3rd topic—"Large or Small Hives" was discussed *pro* and *con*. J. F. Hagarty advocated a small brood-chamber of 6 or 7 frames Simplicity size, as giving him the best results. While H. S. Sutton claimed for the 10-frame hive ample room for sufficient stores to carry the colony over without the close attention that is required with a small hive.

4th topic—"What Should We Cultivate for Bee-Forage?" by H. S. Sutton. He advocated the cultivation of such nectar-bearing trees as would produce value in their growth for lumber or fruit-bearing qualities. He made special mention of the basswood as a tree the cultivation of which should be encouraged, and strongly advocated its value to the farmer as well as to the apiarist.

The 5th topic was presented by Ed Jolley, who set forth the great value of the bee in the pollenization of the inferior fruits; also the declination of the same without pollenization.

6th topic—"The Best Method of Working Bees for Profit," by R. D. Reynolds. He gave good pointers as to location, and the different products of the apiary in demand, with the price above cost of the production. Every one engaged in apiculture should judge for himself whether the rearing of queens, production of comb and extracted honey, or the sale of full colonies would meet this requirement. If a specialty was made of any one branch, try to excel in it.

7th topic—"How to Make Our Conventions Attractive," by R. D. Reynolds. He advocated advertising and talking bees and honey.

After disposing of a lot of questions, a canvass was made for the yield of honey for the year 1894, which showed an average of 30 pounds per colony. The greatest average was that of J. F. Hagarty, being 35 pounds per colony.

The next annual meeting will be held in Franklin, Pa., Dec. 27, 1895.

The officers elected for the ensuing year are: President, R. D. Reynolds, of Cooperstown; Vice-President, Ed Jolley, of Franklin; Treasurer, H. S. Sutton, of Franklin; and Secretary, O. L. Greenlee, of Utica.

Franklin, Pa.

A B C of Bee-Culture.—We have some of these books left, and in order to close them out quickly, we renew the low offers we made on them. This is the fine cyclopedia of bee-keeping by A. I. Root, containing 400 pages and nearly 200 engravings. The regular price is $1.25, but we will send the American Bee Journal one year and the "A B C" bound in cloth—both for only $1.80; or the parchment cover (very heavy paper) "A B C" and the American Bee Journal one year—both together only $1.50.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

Bees and Cane-Mills.

A correspondent living in Mississippi sends the following:

Last fall there was an unusual quantity of cane molasses made in this neighborhood. The weather was warm during the greater part of the time, and the bees flew freely. A visit to the cane-mill disclosed the fact that there was a wholesale destruction of bees going on. They were crushed in the mill, drowned in the cane-juice, and whenever a bee flew through the steam arising from the open kettle, she instantly fell into the boiling syrup. Whenever the syrup was poured off, dead bees by the handful were found at the bottom of the kettle. This went on for three weeks at least, and the result was that colonies previously strong were reduced to mere nuclei, and all hopes of a surplus this year have receded again. In an ordinary year it is not unusual for bees to swarm before the 15th of this month. This year the first young bees had just made their appearance at that date. Per contra, five colonies of blacks purchased from an apiary four miles distant, where there was no molasses made, are very strong in numbers, and apparently ready to swarm. Some of the depopulated colonies show symptoms of "spring dwindling," as laid down in the books. The reason is supposed to be, that such colonies have not sufficient strength to form a cluster in the winter, so that brood-rearing can go on in the early spring, and the result is that there are no young bees to replace the old as they pass away in the spring. The idea suggests itself, in the North and West the cider-mills may be in the same way the cause of spring dwindling.

Can you suggest any plan by which the bees may be restrained in the fall from visiting the cane-mills? Would it do to raise the hive from the bottom-board and tack wire-cloth over the bottom and entrance of the hive, and thus restrain them from going abroad during this season? NOVICE.

Columbia, Miss., March 12.

In our neighborhood we have no cane-mills to entice the bees to destruction, and while I can give the correspondent no advice based on experience in this particular matter, I would suggest out-door feeding prudently applied, during the season of the mills running, with a view to keep the bees at home; or I would remove the bees to a locality beyond the reach of the mill. The latter plan would be attended with some little work, but it might be less expensive than to feed, particularly if the hives have plenty of stores.

I fear the wire-cloth plan might, in the wind-up, be "worse than the disease."

Report of the Texas State Convention.

The 17th annual convention of the Texas State Bee-Keepers' Association met at the residence of W. R. Graham, in Greenville, April 3, with about 20 members present.

Dr. Marshall, in his usual way, opened the convention with a few appropriate remarks and prayer; then Mr. W. R. Graham introduced his wife and daughter, Miss Nellie, and announced that to-day they were celebrating the 44th anniversary of their marriage, and that Miss Nellie was their youngest child.

Dr. Wm. R. Howard, the Secretary, being absent, Mr. J. C. Hunter was elected Secretary; after which the President declared the convention open for business, and questions were called for.

DISCUSSION OF QUESTIONS.

The subject of fastening foundation in frames by means of imbedding wire into it without any other means of fastening, was taken up. A frame was thus exhibited by Mr. Graham. After a somewhat lengthy discussion, it was thought to be practicable.

Painting hives was next discussed at considerable length, *pro* and *con*, and painting was generally recommended.

The structure of hives—the dovetailed or nailed, which is best? After some comment the dovetailed hive was recommended.

Loose hive-bottoms were talked of and endorsed.

What distance from the ground should hives be placed? From 2 to 4 inches high was thought best.

Artificial and other methods of rearing queens was the interesting theme of an address delivered by W. H. White.

In response to an invitation from Messrs. Boyd and Creasy, the convention repaired to their factory to see the machinery in operation in the manufacture of bee-hives and other fixtures for bee-keepers. After enjoying the sights at the factory, they went over to W. R. Graham's queen-rearing apiary, to get a practical insight into queen-rearing.

The kind of frames was discussed. Which is the most convenient and practical, self-spacing or loose-hanging? Loose-hanging frames received the most favor.

The handling of bees, smoking, the best methods of transferring, etc., were discussed, which made it very interesting to the A B C scholar.

Can bees hear? After some debating it was decided that if they could not they had a sense closely allied to that of hearing.

Multiplying colonies was considered, which led to a question of experiment to find a plan by which an average colony can be successfully increased to ten in a single season. The following agreed to try it: Dr. W. K. Marshall, W. R. Graham, W. H. White, J. F. Teel, J. D. McMannamy, R. L. Carson, H. L. Bolton, J. M. Jeffcoat, and Chas. Williams; and report at the next annual meeting. Also the same members, together with J. G. Barnett and I. H. Hightower, agreed to see how much honey they can produce with one colony during this season, and report at a meeting to be held in the summer.

The best plans to keep bees from swarming were taken up and discussed at some length. Adjourned to meet at 9 a.m., April 4.

THE SECOND DAY—APRIL 4TH.

The convention was called to order by Pres. W. K. Marshall. Secretary J. C. Hunter being absent, the books were turned over to W. H. White, as Secretary, to complete the minutes.

Shall we hold a fall meeting? was asked. It was heartily agreed to, and the time set for Aug. 21 and 22. Place of meeting, Greenville. The time of our next annual meeting is the first Wednesday and Thursday in April, 1896.

The election of officers resulted as follows:

Dr. Marshall, President; W. R. Graham, Vice-President; W. H. White, Secretary, Deport, Tex., and F. F. Rockwell, of Leonard, Treasurer.

Has any member died since the last meeting? G. A. Wilson was announced as having passed away March 6, 1895. H. F. Bolton, W. R. Graham, Dr. W. K. Marshall, and P. G. Carter were appointed a committee to draft suitable resolutions, which were presented later and unanimously adopted.

Is it profitable to hold county and neighborhood bee-meetings? It was agreed that it is very profitable.

Pasturage for bees was discussed, and several plants were recommended, among them alfalfa and sweet clover being more highly spoken of.

Transferring was talked about, many giving their plans and tools used in the operations, thus making it interesting to the beginner.

The success and failure of colonies apparently of equal strength, was discussed. The queen was thought to control the whole affair.

The distance bees will go for honey was considered, but no definite distance could be fixed. It was thought any distance up to seven miles.

It was proposed that we make an exhibit at our meeting in August, of bees and supplies. An address by Mr. W. R. Graham, on the exhibit at our next meeting, was listened to with great interest.

Thanks were tendered Mr. Graham and family for their hospitality during the convention, The convention then adjourned to meet at Greenville, Aug. 21 and 22, 1895.

Deport, Tex. W. H. WHITE, *Sec.*

Honey as Food and Medicine.—A new and revised edition of this 32-page pamphlet is now issued. It has 5 blank pages on which to write or paste recipes taken from other sources. It is just what its name indicates, and should be liberally distributed among the people everywhere to create a demand for honey. It contains a number of recipes on the use of honey as food and as medicine, besides much other interesting and valuable information. Prices, postpaid, are: Single copy, 5 cts.; 10 copies 35 cts.; 50 for $1.50; 100 for $2.50. Better give them a trial. Send all orders to the Bee Journal office.

Ten weeks for ten cents. See page 316.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Freight Rates on Bee-Hives.—If I remember rightly, there was a committee appointed by the North American to look up the matter of rates and see what could be done by way of securing better classifications, and reductions of rates. I trust they have been investigating the matter and are able by this time to "report progress," if nothing more. I can see no reason or sense in charging double first-class rates on a bee-hive made up, when other things much more bulky, and of more value, go at a less rate. I know that bee-hives "nested" are only first-class, but I would like to see any classification man "nest" some bee-hives, if that word nested continues to mean what it did when I was a boy and nested the pails in order to draw them home when the sap season was over in the spring. As the only way I know to nest a hive made up is to pack something in it, when I do this I bill it out "nested." The truth of the matter is that justice, reason and common-sense would suggest that a bee-hive made up be classed as first-class freight, and this unfair and senseless "nesting" business be done away with.

Then, I think we people here in the West are entitled to better rates by the carload. I say here in the West because I know more about rates here. The rate from from Chicago to the Missouri river has been 17½ cents for a long time, but now, when times are close and all goods are sold at a reduction, a railroad pool has put it at 18½ cents, and not satisfied with this, they have made the minimum 24,000 pounds instead of 20,000, as it has been. The rate on cut box-lumber is 16 cents, and I can see no reason why a car of bee-hives in the flat should not go at the same.

I am inclined to think that one reason why the bee-keepers have not gotten better rates on their goods is that they have not worked unitedly, and brought enough influence to bear on the Classification Committee. I had this impressed on my mind the other day when I asked the local rate on flour from this city to Topeka, and was informed that it was 15 cents per hundred for flour in sacks. The rate on bee-hives made up, without "nesting," would be double first-class. A hundred pounds of bee-hives would cost 58 cents, while two 48-pound sacks of flour would cost 15 cents. The rate on hives, knocked down, is 19 cents, and it would cost more to ship a hundred pounds of hives this way than it would two sacks of flour. Why? The only way I can account for it is to lay it to the united action of the people engaged in the production and sale of flour.

I hope the committee appointed at St. Joseph will not fail to try their hands at the "influence" business.

[For reply to the foregoing, I refer the reader to the editorial on this subject on page 316.—EDITOR.]

Candy for Bees.—"Candy is capital stuff to eke out stores, but I quite agree with Mr. Webster that bees won't live on candy alone."—A. Sharp, in British Bee Journal.

Perhaps bees would not live on candy alone the year around, but I do know they will live on it, if properly made, for six or eight weeks, or longer, if the weather continues cold, and thrive, and come out in the spring in as fine condition as they would on sealed honey.

I see that Mr. Cowan insists that candy should be soft. He does not say when the soft candy is to be used; but if for winter stores, I would be glad if he or someone else would explain the advantage of soft candy. I am not after argument, but a better understanding of the real merits of candy for bees.

Only One Cent a Copy for copies of the American Bee Journal before Jan. 1, 1895. We have them running back for about 10 years. But you must let us select them, as we cannot furnish them in regular order, and probably not any particular copies. Just send us as many one-cent stamps as you may want old copies, and we will mail them to you.

A Cool Success.—A correspondent in one of our apiarian exchanges said: "I am wintering on summer stands with great success." Poor man! how cold he must have been the past winter! He might "winter" with as "great success" in the house with other folks. Of course, he meant that he was winteriug his bees on the summer stands, though he didn't say it.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Top-Ventilation in the Cellar.

Frank Cole wants to know, on page 289, what I think of his top-ventilation in the cellar. It suits me because it seems to suit the bees. When I first wintered bees in the cellar I had them more open on top than he has. Absorbents were not talked of then and my bees were in box-hives, and I just turned them upside down, leaving them entirely uncovered. They wintered well. That was Quinby's plan. Latterly my practice has been just the reverse, leaving all closed at the top and very open below. Either plan is good, and I'm not sure it matters so much what way is used, only so there is plenty of chance for the bees to get all the air they want, and so that the air in the cellar is always good.

Using Old Sections.

Over 700 sections with foundation in supers (some of them two years old, but the most made up new last year) were left last year, because we did not get a pound of honey. Can these sections be used profitably this season? Will the bees work in them? Or will it pay to throw them into the fire and get new ones? G. R.

ANSWER.—I expect to use some sections this year that are four years old. If the sections are nice and clean, use them. If, however, you were unfortunate enough to leave them on late, so as to have the bees daub the foundation with propolis, then I'd rather not use them.

Swarming with Clipped Queens.

I would like to know what will become of a queen, when her wing is clipped, if the bees are allowed to swarm naturally. Will the bees kill her, or will she crawl out of the hive, or will the young queen go? D. H.

ANSWER.—When a swarm issues with a clipped queen, if no one is by to see to the swarm, or if there is no Alley trap to catch the queen, the queen will come out and try to go with the swarm. Not being able to do so, she will generally crawl back into the hive. The swarm will usually return to the hive when they find there is no queen with them, but sometimes they may return to the wrong hive. Then the swarm may issue in a day or two again, and if they are left entirely to themselves, in about eight days from the time of the first swarm a young queen will be hatched out and the old queen will be killed. The young queen will then go with the swarm.

Using Division-Boards—Winter Cases.

I have now (April 18) four colonies of bees (hybrids) in 10-frame Langstroth hives, wintered on their summer stands. All the colonies were equally strong in the fall, having about 30 pounds of honey each for winter stores. They were all packed with an enamel cloth over the brood-frames, on which was set a T super with heavy paper in the bottom, then filled with chaff. Two colonies had the additional protection of outside winter cases, while two (the new swarms of last spring) were without further protection than that above stated. Those with the winter-cases came out with plenty of honey and few bees, while the condition of the two unprotected ones is just the reverse—plenty of bees and little honey.

I am now about to put division-boards in all four hives, contracting them to six or eight frames as their needs may require. I also intend taking a frame full of good honey from each one of the two hives having an abundance and give it to the two that are short of stores. What do you think of the treatment? The last winter has been the severest here in the recollection of the oldest inhabitants. J. F. I.

Easton, Pa.

ANSWER.—Before answering your question, a word about the shape in which it is sent. I am glad to do my best to answer any question that comes, no matter in what shape, and some seem to think they can be better answered if written on any old scrap of paper in such hurried manner as to be hard to decipher. That's a mistake. I can't answer such questions a bit better. And while I try to do my best with all, I must confess to a real pleasure when I find one like the one now before me. The writing is plain as print, everything neat and clear, and if you are as neat and careful about your bee-work, Friend I., you ought to be a successful bee-keeper, even if you work mainly for the pleasure of it. But now to your questions.

I think your plan of treatment is all right. Experiments carefully made in France seemed to prove that division-boards were no better than combs, and I suppose they don't do as much good as many think. Still I can't help thinking that if the division-boards are close-fitting at top and ends they serve a good purpose.

The results of your wintering seem to agree with what C. F. Muth insists on, that protection on top is all that is necessary. I wish it had happened that one of the old and one of the new colonies had had the winter-cases. For there's at least a possibility that there was a difference in the strength of the colonies that partly accounted for the difference in wintering.

Dequeening Colonies.

How is dequeening practiced?

ANSWER.—Dequeening, or unqueening, is simply removing or destroying a queen, in whatever way it is done. Perhaps oftenest, when the term is used, it means depriving a colony of its queen during the honey harvest. When this was first practiced, I think the queen was usually, if not always, confined in a cage in the hive among her own bees. Afterward the custom came with some to remove the queen entirely from the hive, keeping her in a nucleus or other colony, returning her, or another queen, in due time.

Producing Honey and Preventing Increase.

The limits of my "farm" is four colonies, the number I now have. How can I manipulate them to the best advantage to produce comb honey and prevent increase? J. F. I.

Easton, Pa.

ANSWER.—That is a very difficult question, and I don't know enough to answer it for sure. If you are on hand to know when swarms issue, here is a plan that I have used with a good deal of satisfaction:

When the swarm issues, cage the queen, leaving her in the care of her bees until it suits your convenience to take care of them. Not later than five days after swarming, shake off about half the bees from the combs, putting them in a new hive, leaving the old hive in its old place, and leaving in it one or two combs of brood, especially young brood and eggs, but no queen-cells. These combs of brood may be taken from anywhere you like, if need be taking from the colony under treatment, but in that case they must be changed again. Give the queen to the new hive, and place it close beside the old hive, although I prefer to put it on top. This new hive being left weak in bees, and no field-workers adding to its stores, the bees will make sure work of destroying all queen-cells without any care on your part. At the end of ten days from swarming, put this new hive with all its contents in place of the old one, removing the latter to a new place or making any disposition of it you like. It will have some fine queen-cells, and if you want to start a nucleus, all you need do it to set it in a new place.

I said you would leave two combs of brood in the first place in the old hive. I would add at least two more combs, and then you can fill up with dummies, or if you have them, with combs of honey. If you cannot watch for swarms, or do not wish to, then attach to each hive an Alley queen-trap, and that will do the watching for you.

The Star Spangled Banner's Author.—Many interesting things about Francis Scott Key—the author of the "Star Spangled Banner"—are contained in a pamphlet, which may be obtained *free*, from the Key Monument Association, of Frederick City, Maryland, by sending one 2-cent stamp for postage. This Association is raising funds for a suitable monument to the poet, and they suggest, that in the schools and everywhere, upon or before Flag Day (June 14), this subject be suitably recognized. Contributions, however small, are asked for. Every one who loves the Flag, ought to have some small share in building this monument. The Governor of Maryland has strongly endorsed the movement. The names of all contributors will be preserved in the crypt of the monument, and published (without amount) in the history of the monument when completed.

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George W. York, - - Editor.

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Editorial Budget.

Dr. Miller, of Marengo, Ill., made me a short but pleasant visit last week while here to present the freight-rate matter before the Classification Committee of the various railroads. The Doctor is just as good-natured and full of bee-talk as ever.

The Toronto Convention of the North American is already being arranged for. I notice by the Canadian Bee Journal that President Holtermann has secured the splendid auditorium in connection with the Normal School for the convention, situated in a very desirable part of the city. Efforts are now being put forth to secure the best possible railroad rates from leading points in Canada and the United States. It is none too early to settle such matters, as the months so swiftly pass by. It won't be Canada's fault if the convention isn't a great success.

The Committee on Freight Rates, appointed by the North American at its meeting in St. Joseph, last October, was finally able, on May 8, here in Chicago, to get before the whole Classification Committee of the railroads, for the purpose of urging a reduction in the freght rates on honey, beeswax and bee-supplies.

For nearly an hour, Dr. Miller, representing the North American committee, explained matters most ably and fully to some 40 railroad men, and tried to show them wherein it would be mutually advantageous to reduce the rates on goods shipped by bee-keepers and bee-supply manufacturers.

Mr. Herman F. Moore, a promising young lawyer here in Chicago, with Mr. R. A. Burnett, the commission man, and the editor of the American Bee Journal, accompanied Dr. Miller, and helped him in presenting the case before the Classification Committee.

Mr. Newman kindly sent to the room where the committees met, several hives in the flat prepared for shipment, a honey-extractor, smokers, shipping-crates, etc.; and Mr. Burnett sent over a crate of nice comb honey and a large empty shipping-crate with handles, for holding probably a dozen small crates of comb honey. This was done to show the railroad people more clearly the nature and make-up of the goods upon which a reduction of rates was asked for.

After presenting the matters seemingly to the satisfaction of the Classification Committee, Dr. Miller and his assistants retired, leaving those who have to do with fixing the rates to decide among themselves whether or not they would grant the requests of the committee appointed by the North American Bee-Keepers' Association. At this time (May 10) I have not heard the decision, but expect to be able to give something definite next week.

I want to testify to the clear and able manner in which Dr. Miller presented the case. Many were the questions asked him by Chairman Ripley and others, which only a practical bee-man could have answered; and the Doctor almost invariably did it in such a happy manner that often the whole crowd were much amused. It was almost a lecture on bee-keeping, too, for even railroad men are interested in the busy bee when they have some one to talk to them upon the subject who knows more about it than he "don't know," or than he is willing to admit.

I think I am safe in predicting that at least some of the concessions will be granted by the Classification Committee.

Ten Weeks for Ten Cents.—This is a "trial trip" offer to those who are not now subscribers to the American Bee Journal. Undoubtedly there are thousands who would take this journal regularly if they only had a "good taste" of it, so as to know what a help it would be to them in their work with bees. In order that such bee-keepers may be able to get that "taste," the very low offer of "10 weeks for 10 cents" is made.

Now, dear reader, you cannot do a better service than to show this offer to your neighbor bee-keeping friends, and urge them to send on their 10 cents and get the next 10 numbers of the old American Bee Journal. In fact, *you* could afford to send the 10 cents for them, and then after the 10 weeks expire, get them as new subscribers for a year. They will be easy to secure then, for the 10 numbers will be a fair trial, and they will want the Bee Journal regularly if they are at all interested in bee-keeping.

Remember, it's *only 10 cents for 10 weeks*, to all not now subscribers to the Bee Journal.

Mr. R. F. Holtermann, editor of the Canadian Bee Journal, has been appointed Lecturer in Apiculture at the Ontario Agricultural College, located in Guelph, Ont. He is also to conduct a series of apiarian experiments. This is an important position, and places Mr. H. in a field where he can render invaluable service to the cause of progressive bee-culture.

Wagner's Flat Pea (*Lathyrus Silvestris*) has been referred to in the American Bee Journal several times the past year or two. A short time ago I came across a report concerning it issued in July, 1893, by Mr. Clinton D. Smith, Director of the Michigan Experiment Station. Thinking there might have been a later report sent out, and that it might prove to be a valuable honey-plant, I wrote to Mr. Smith, to which he replied as follows:

AGRICULTURAL COLLEGE, Mich., April 27, 1895.
American Bee Journal, Chicago, Ill.

Gentlemen:—Your letter of the 25th inst. is at hand. We have issued no Bulletin concerning the flat pea since July, 1893. I know nothing as to its quality as a honey-yielder, although I have never noticed that bees work on the plant. I very much doubt whether it can ever become a bee-plant, since it is so hard to get it started, and the results are so altogether unsatisfactory. Yours respectfully,

CLINTON D. SMITH, *Director.*

The report sent out in 1893, which is spoken of above, reads thus:

FLAT PEA (*Lathyrus Silvestris*).

"Those who have walked through the Station field since the first of June, cannot fail to have noted the very luxuriant and beautiful plat of more than an acre in extent of the new forage-plant, *Lathyrus Silvestris*. It started early in the spring, every root having endured the severe cold of winter without injury. The tops were uninjured last fall by the severe frosts. They did not stop growing until heavy freez-

ing came. Indeed, where there was quite a covering of tops and the snow fell early remained on the ground, those sprouts on the under side at the surface of the ground were not killed by the freezing of winter, but remained green until the plants began their new growth this spring. The whole field started early, and made a green and beautiful appearance. Then came on a long spell of cold and windy weather, which kept everything back, hence it was not until late that the plants got down to work. Since then it has let itself loose, so to say, and grown in a reckless but determined fashion. Every root sent out numerous shoots that spread away on every side until the ground was covered with a dense mass. Then it began to climb up. The teudrils of one shoot caught on to all the neighboring shoots, and by June there was a deep garment of verdure more than three feet in depth, which yielded at the rate of 16 tons of green forage per acre. Cured, it made at the rate of four tons of choice hay per acre. The forage is eaten eagerly by all kinds of farm stock. Not only does it enrich the soil, but it is able to flourish on very poor soil. Our flat peas were sown on the most sandy soil on our farm. When one sees the freshly-dug plant, with its hundreds of tubercles, he feels sure that if any plant can enrich the soil, this one can."

In Gleanings for May 1, I find an account of the experience of Mr. A. I. Root, of Medina, Ohio, with the flat pea, who says this about it:

LATHYRUS, AGAIN.

To-day (April 26) we are taking up our plants and moving them to the field. I was astonished to see the nitrogen-nodules strung along on the little rootlets, like beads on a cord. It is now satisfactorily settled that all leguminous plants—peas, clover, etc., that produce these nodules or little white knobs the size of a pinhead on their roots, have the faculty of taking nitrogen from the atmosphere. That is why clover is worth more than any other plant to plow under. At the Experiment Station in Florida they showed me these nodules on their leguminous plants. Well, I never saw anything like the number there is on our lathyrus. The roots go down so deep that my stalwart friend "Ben" said it was too much work to *try* to dig them without breaking the roots off. At its present stage, with the foliage only a few inches in height, I am sure cows and horses will take it as readily as they will any of our clovers. When it gets to be tall and strong it may be different. If you wish to see one of these plants, foliage and all, we will mail you one for 5 cents, or ten of them for 25 cents. With such a root as they have, I do not know how the plant can fail to grow.

The wonderful power this lathyrus possesses to penetrate a hard and impervious subsoil was shown in digging up a plant an hour ago, that had forced its root absolutely through a piece of partially rotten board that was down in the plant-bed. The root came through on the other side, and went several inches beyond the board; but it was so firmly fastened that the bit of board was carried along and put out with the plant. The roots invariably go straight down; and after they are six months old they will, without doubt, be proof against drouth to dry up the plant, or against the effects of frost to heave it out in winter.

Those who wish to experiment with this new forage-plant can send to Mr. Root for plants, as offered above.

On page 585 of the Bee Journal for May 10, 1894, I called attention to the flat pea, and also gave an illustration of it. At that time these paragraphs were published, and they are given again for the benefit of the new readers of the Bee Journal:

It seems that Herr Wagner, of Munich, Germany, has been at work for the past 30 years, crossing and improving, and from a bitter weed has developed a succulent forage-plant unusually rich in sugar, and relished by all kinds of stock. The illustration of the plant shows something much like the sweet-pea, to which it is closely related.

The roots are said to penetrate the hardest, driest and rockiest soils, reaching to the depth of 10 or 20 feet. A dry season does not affect it. Once started it will last for 50 years. Barren land occupied by it is changed to fertile soil. Those who understand how red clover takes so much of its nourishment from the air, will not have so much difficulty in believing this. This flat pea belongs to the *leguminosæ*, as well as clover.

Cows fed on this plant give forth more milk than when fed on clover, and we hardly dare say how much more butter. Some of the German friends count the introduction of this plant equally important with that of the potato.

Railroad companies are planting along their embankments and deep cuts, so that its long roots may prevent washing away of the soil.

Four tons of dry hay per acre are obtained, three cuttings being made. The first cutting takes away all chance for a honey crop at that time, but, if we undertand it correctly, the bees have a rich harvest on its blossoms after the first cutting, and not until October is its yield of nectar over.

Of course we are only giving what is reported, and it remains to be seen whether the plant is of value in this country. A somewhat serious drawback is the difficulty of getting a start. It is very liable to kill out during the first or second winter.

Pleasant Occupation of Tending Bees is the subject of an intensely interesting and finely illustrated article appearing in the May and June numbers of The Cosmopolitan, written by Mr. W. Z. Hutchinson, the scholarly and practical editor of the Bee-Keepers' Review. The first half of the article appears in the May number of that popular monthly, and contains 13 superb apiarian pictures done in half-tone. Mr. H. made all the original photographs himself, so all are true to nature. The first shows a side view of the interior of a bee-hive—with bees, frames, combs and all. Then follow a neat section of honey, worker-bees and sting, drone, queen-bee and egg—the last three being magnified about four times; comb from the brood-nest of a colony that has just cast a swarm, comb in process of construction, a Vermont apiary in winter, group of queen-cells, bellows bee-smoker, queen shipping-cage, pulling bee-stings, and a typical farm apiary.

Evidently the editor of The Cosmopolitan furnished the double title to Mr. Hutchinson's article, for the second part reads thus: "Being a complete account of the honey-bee, his home, his migrations, his habits of life, his business methods, his storehouses, his food, and communal life." One versed in bee-keeping, if reading no further, would conclude it was all about drones, but it isn't.

However, taken as a whole, it is the richest thing on bees, I believe, that has ever appeared in any popular magazine. And no more able author could have been selected to prepare it. The Cosmopolitan has honored both itself and the pursuit of bee-culture, for it has thus presented to a large constituency of readers a most fascinating subject in a very captivating manner. The pictures alone are worth many times the price of each number. Better get the May and June numbers of The Cosmopolitan (20 cents each), furnished by W. Z. Hutchinson, Flint, Mich.

Among the Bee-Papers

Conducted by "GLEANER."

SPRING DESERTING OF HIVES.

Lately, since the queen-excluding zinc has become common, I have simply hived back in its own hive the colony swarming out, and placed a strip of perforated zinc at the entrance, thus keeping the queen from going out, in which case the bees will return after each swarming-out; and if such colony so treated does not die by dwindling it can usually be saved in this way. But, as I said, unless for some reason you wish to preserve the individuality of any colony which once swarms out, the best thing to do is to unite it with some other colony, as the work required to make a good colony of such a discouraged colony amounts to more than any ordinary colony is worth.—Doolittle, in Gleanings.

SELF-SPACING TACKS FOR FRAMES.

J. M. Moore speaks of these on page 286. A few years ago they were mentioned with favor in Gleanings, and perhaps elsewhere. One objection is that as the frames cannot be absolutely without any play lengthwise, the middle points of the heads of the nails or tacks will not always exactly meet, and so there will be a variation in the spacing. A single nail

with a head sufficiently large would overcome this objection, but would not be so good in other respects.

As everything connected with the prevention of brace-combs is of interest, it would be desirable to have Mr. Moore tell us what other difference there was to account for the smaller number of brace-combs than with the V-edged Hoffman. I don't see how it is possible for this kind of apparatus for spacing to make any difference in the amount of brace-combs. If the top-bars were the same distance apart, and of the same width and thickness, I should expect the brace-combs to be the same. By the way, he speaks of the top-bars being ⅜ inch apart. Is not ¼ inch considered the better distance nowadays?

A BIG CONVENTION.

Here's an item from the Australian Bee-Bulletin: "A bee-keepers' convention was held at Mrs. Atchley's, Beeville, in December, at which some 300 delegates were present." We have the credit of doing some tall lying on this continent, esteemed Australian, but you seem to have struck the champion liar. Please tell us who gave you that 300, that he may be properly crowned.

T SUPER VS. THE SECTION-HOLDER.

Dr. Miller has a tilt with the editor of Gleanings as to the respective merits of the T super and section-holder, the former stoutly maintaining that the T super is better, and the latter rather hinting that the doctor is somewhat old-fogy. Many section-holders are ordered and few T supers, but the Doctor claims that is because Root's catalogue says section-holders are the best. Perhaps the editor gives the chief reason for his preference for the section-holder when he says: "T supers formerly had the lead; but they were not very well adapted to the Dovetailed hive, without making supers of different lengths from the regular hive-body." Strangely enough, the Doctor says nothing about the special advantage that the T super has in being adapted to sections of any width, while the section-holder can take only one width.

Canadian Beedom.

Conducted by "BEE-MASTER."

Bee-Keeping on a Small Scale.

Here in Canada, far more than in the United States, bee-keeping is practiced in a small way, and apiaries of two or three colonies are quite common. In Britain, even more than in this country, apiaries of small extent abound. In the United States leading bee-keepers discourage this kind of thing. In Britain it is the other way, and the cottager is advised and helped to carry on a little apiary as an adjunct to his means of getting a livelihood. Why bee-keeping on a small scale should be frowned upon, it is not so easy to perceive. The extensive gardener does not try to put down gardening on a 7x9 area. The dairyman does not object to householders keeping a family cow. Nor is it easy to see why objection should be made to a family producing its own stock and store of honey.

What does deserve to be discouraged is entering on bee-keeping, whether on a large or small scale, in utter ignorance of the pursuit. It is the height of folly for people to suppose, as many do, that it is only necessary to get a colony of bees and then leave them to shift for themselves. The home garden and the family cow will not thrive if thus treated. There is a "know-how" connected with everything which is essential to success. This must be acquired in some way or other, or it is folly to attempt gardening, cow-keeping, bee-keeping or any other pursuit.

As illustrative of bee-keeping on a small scale, attention is called to a communication published herewith under the heading, "How Two Colonies Wintered." The writer evidently has the "know-how," and the details of his management and experience are interesting. I hope he will give more of the history of his two colonies later on in the season. I do not think he will change his mind as to the advisability of out-door wintering in the latitude of Toronto. Farther north, say Muskoka, the cellar may be preferable, but in the milder parts of Ontario, wintering as described by Mr. Grant is quite practicable, and far less trouble than cellar-wintering.

As a scientific pastime, bee-keeping on a small scale is greatly to be commended, apart from any economical or financial reasons. I know a doctor in Montreal who for several years kept an observing bee-hive on a balcony opening from an upstairs window, and derived no end of pleasure from observing and studying the ways of "the little busy bee." It is well if our recreations can be made to increase our stock and store of useful knowledge.

How Two Colonies Wintered.

"BEE-MASTER," *Dear Sir*:—Being a reader of the American Bee Journal and a bee-man of fairly long standing, and successful to boot, though not in this hemisphere, I take much pleasure in perusing its contents. In the old country—Britain—from which I hail, we have, as you know, no such extremes of climate as are experienced here, and consequently the bees, in winter time especially, are left much more to themselves. I have two colonies, the result of one I bought last spring, and these have come through the winter in tip-top condition. I could not have desired anything better. I didn't have recourse to the cellar as a protection against the rigorous winter through which we have just come. The hives stood on the summer stands.

In the autumn I made a box large enough to hold both hives and admit of a space of six inches or so all round them. This space I filled with forest leaves firmly packed, and on top of the hives I placed four or five inches of cork-dust; about this again more leaves. The box was filled to the top and nailed down. In the one case I made no accommodation for ventilation from beneath. This hive was also virtually full of bees in autumn. In the other case the hive was not so full of bees, yet I gave two inches or so of space below the frames. Both hives were closed from the beginning of December until the break up of winter the end of March, making altogether nearly four months.

By closing up I mean, I put on in front of the hive wire-gauze, so that no bees could by any means get out. I gave them no further attention until I took off the wire.

I found in the case of the former hive a very large number of dead bees and still a strong colony. A large proportion of the dead bees were absolutely black and shiny, minus wings, etc.; the result, I think, of some disease which I slightly noticed in the autumn, though I can't explain the nature or cause. This colony is entirely healthy now, however.

In the other case I found about a hundred or so dead bees, and a colony much stronger than when closed up in autumn. This hive besides was perfectly dry in every corner—not so the other, yet it was not bad. Had I done the same with bees in the old country, I should have had two colonies either dead or dying with dysentry. But here they seem to suffer no inconvenience whatever from long confinement.

I forgot to say that I shaded both hives from the rays of the sun, and that the entrance was the whole width of the hive. I am inclined to think that bees will, under favorable conditions as to food and protection from damp, stand any amount of cold. My experience of a year ago bears me out in this. I had occasion to be visiting friends in the State of Rhode Island a year ago, when by accident I discovered a colony of bees in a gate-post. I went to work at once to get them out, as I had only a day or two longer to stay, and this was in March, just after the break up of a month of the coldest weather I have as yet experienced. To my great astonishment, I got as large a number of bees as I ever saw in any individual colony in mid-summer. The entrance I may say to the nest was from the top of the post, immediately below the head-cope, which jutted out all around far enough to fully protect the bees from wet. There was an ample supply of stores and no end of brood.

I would not for a minute say that it is not necessary to use cellars for protection, which reduces to a minimum the large amount of labor necessary to proper protection from dampness, yet it seems to me that no care need be taken in keeping up a uniform degree of heat around the hives, in order to have strong colonies in spring. No doubt this is not the case everywhere, and I may yet have to change my mind in regard to wintering, as doubtless bee-keepers throughout the Dominion of Canada have tried all places and found the cellar the most reliable.

There seems to be a good prospect for bee-keepers this year in this vicinity. G. W. GRANT.

Toronto, Ont., April 26.

That New Song—"Queenie Jeanette"—which is being sung everywhere, we can send you for 40 cents, postpaid, or club it with the American Bee Journal for one year—both for only $1.10. Or, send us one new subscriber for a year (with $1.00), and we will mail you a copy of the song free.

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20A13 *Mention the American Bee Journal.*

General Items.

At Last, Good Prospects.

There is at last, after four years of almost an entire failure, a good prospect for the bee-keeper. Among those who keep bees in the old style, which compose the large majority in this part of north Missouri, the last winter about completed the destruction which had been gradually going on for three years. I did fairly well last year, getting 400 pounds of nice clover and basswood honey from four colonies.

I have been a reader of the American Bee Journal for seven or eight years, and frequently find in one number information that pays for one year's subscription.

J. T. ALLEN, M. D.

Gallatin, Mo., May 2.

Not a Honey-Tree.

I enclose specimen from a tree near my house which I would like to know the name of, as it is now in full blossom (April 20), such as I send you, and the bees are just swarming over it. The seed from which the tree was grown came from Pennsylvania. Do you think the bees are getting any honey from it?

My bees are doing splendidly; I lost only one colony out of 80 this spring. They were on the summer stands all winter.

W. H. HOPEWELL.

Stephens City, Va.

[I mailed the specimen to Prof. Cook, who kindly reports as follows:—EDITOR.]

A mere sprig with no leaves, and only staminate blossoms; from these no honey, only pollen, could come. It is too small a specimen.—A. J. COOK.

Death of Mr. J. B. Black.

We have to chronicle the sad news of the death of another professional apiarist—J. B. Black, of Pattonsburg, Mo. The cause of his death was pneumonia. He began to make bees a study about seven years ago, and gradually made it his profession from pure love of the busy insects. Although a middle-aged man when he became deeply interested in the study of bees, he carefully posted himself on all the important details of apiary management, and was "up" with modern methods of keeping and improving an apiary. He delighted in scientific discussion of our most difficult problems. He was remarkably successful in cellar-wintering, always coming out in the spring with trifling loss. His apiary, of some 70 colonies, came through the past winter with only two lost, although the past summer was fearfully dry. Wm. Black will take charge of the apiary. It will be long before we cease to miss his genial father. He died a triumphant Christian. G. F. F.

Moving Bees Successfully.

Feeling indebted to the many contributors of the Bee Journal for valuable suggestions, prompts me to offer a bit of experience in regard to moving bees successfully, that is, to prevent suffocation in the hive when placed upon a wagon and hauled for a considerable distance.

It seems to be a prevailing opinion that the hive must be closed so as to prevent the bees from escaping, and acting upon this principle caused me to lose several valuable colonies. I noticed, however, that if there was a smoker on the wagon, and placed on the front end so that the smoke would flow back over the hives, that even though there was a hole where the bees could escape, they would not leave the hive, not only at night, but also on a bright sunshiny day. Acting upon this, I decided that it was not necessary to confine them to the hive at all, and further experiment taught that the principle was a correct one.

My method of moving bees now is as fol-

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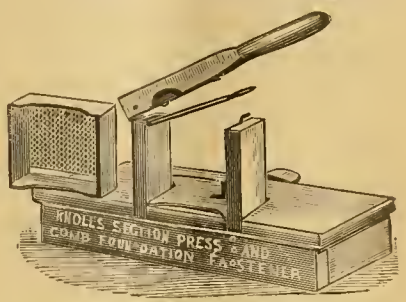

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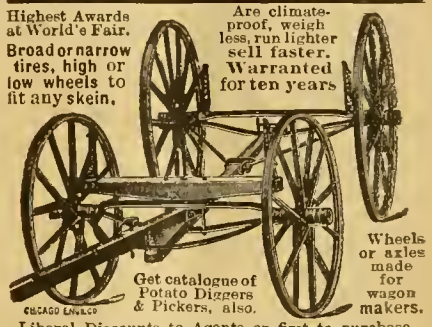
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lows: I take a small sheet, or anything that will completely cover a hive, and when the bees are all in—either morning or evening—I throw this sheet over the hive and blow a puff or two of smoke under it. I then pick it up and load it upon the wagon, which is also provided with a sheet large enough to cover the wagon-box entirely. Then after another puff or two of smoke under the small sheet to drive them all in, I remove it and throw the large sheet over the hive, and continue this way until the wagon is loaded, and by occasionally raising the edge of the sheet and blowing a few puffs of smoke under it, the bees are prevented from trying to get out and sting the horses, and they can be hauled all day, on warm days, too, with perfect safety, both as to stinging the team and from suffocation.

If I want to unload them before they all go back into their respective hives, as they will come out for air, I blow a dense smoke under the sheet to drive them back, then uncover the hives one by one, and use the small sheet to unload, the same as in loading. I have tried this method until I know that it is a success, provided that the combs are not too new and tender, so as to be broken by the jar of the wagon.

San Pasqual, Calif. A. M. STRIPLIN.

Andrenæ—Honey-Pilferers.

Enclosed please find two insects which I found to-day while watching my bees. They alight on the bees' backs and bite them with their large nippers. Please let me know through your valuable paper what these insects are, and whether they are a dangerous enemy of the bees or not.

My 14 colonies are all right so far, and look vigorously for something to do.

HERBERT J. VAN WAGENEN.

Westerville, N. Y., April 17.

[Prof. Cook, to whom the insects were forwarded, replies thus:—EDITOR.]

These are Andrenæ. They often go into hives and pilfer the honey. I am skeptical about their biting the bees; at least I never saw them do it.—A. J. COOK.

Experience in Wintering Bees.

From observation and my own experience, I am constrained to believe with Mr. Pond (page 235) that it is not the *severity* or *duration* of cold weather that causes bees to winter-kill, but excess of moisture. My experience extends over a period of three years—the first winter I kept 4 colonies, the second 11, and the third 17.

To prepare for wintering I usually reduce the number of frames to from 4 to 6, according to the size of the colony; I then put chaff division-boards at the sides, with a Hill device and chaff cushion on top, and give full width entrance; also see that they have about 25 pounds of stores per colony. My bees have always wintered well, and without loss. They are Italians.

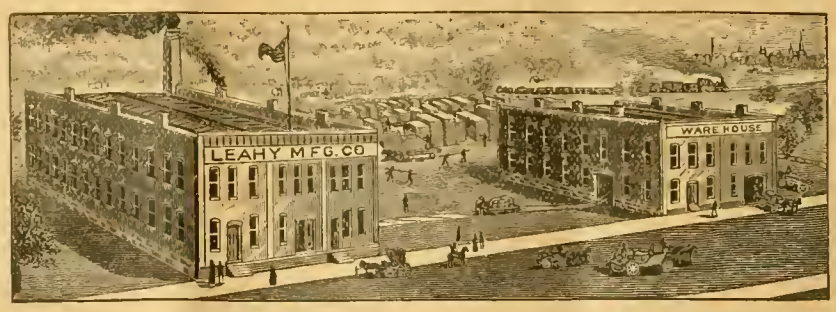
Some of my neighbors who neglected to take such precautions for wintering have lost heavily. They are somewhat puzzled to know why their bees should die with from 20 to 40 pounds in the hive. I have opened several colonies which perished in this manner, and I invariably found the dead bees and combs covered with moisture. I have yet to see the colony with plenty of stores, and proper top ventilation, which has thus perished. JOHN WELCH, JR.

Frost, Ohio.

Bees and Strawberries.

Mr. Eugene Secor says that bees seldom work on strawberry bloom, and doubtless he states the fact so far as his vicinity is concerned. But here in Illinois they do work on them. Whether they fertilize the berries or not I do not know, but my belief is strong that they do, or help to do so.

Three years ago I had a patch of strawberries one rod wide and 14 rods long. The



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center of the bed was planted with staminate plants, the sides with pistilate plants. The winter proved hard on the plants, and they winter-killed badly—the staminate plants much the worst, in fact they were about all dead, so that there was not one staminate plant to 25 of the pistilate plants. This made me watch the berry bed very closely.

Well, blooming time came, and with it the bees—*how they did swarm over the bloom!* I saw as many as three bees on one bunch of bloom; still, I expected a very poor crop of berries; yet, when picking came, I seldom ever saw so fine, and so many berries—I am afraid to say how many—and the bees stuck to them as long as the bloom lasted. I do not know that they were the cause of the immense crop, but I believe it, especially as it seemed that there were no staminate plants close enough to have fertilized one part of the bed, yet it seemed as good as any.

I give the above for Mr. Secor's benefit, but it may be with him, with strawberries, as it is with golden-rod with me. Bees here seldom work on golden-rod, but I have no doubt they work freely on it in many places. S. N. BLACK.

Clayton, Ills.

Basswood the Only Hope.

We wintered 242 colonies with a loss of 10 per cent. White clover is almost extinct, and our only hope for white honey is the basswood. S. WATERS & SON.

McGregor, Iowa, April 24.

Every Prospect for a Good Crop.

We have every prospect here for a good crop of honey. Bees are strong—no winter loss. We have had good heavy rains.

Monroe, Iowa, April 17. J. A. NASH.

Wintered Best for Years.

Bees have wintered the best they have for years, although we have had a very severe winter. JOHN L. GEORGE.

Springfield, N. H., April 22.

Good Prospects for a Crop.

Prospects are good for a crop of honey. I have 23 colonies which I wintered on the summer stands without loss.

JNO. A. BLOCHER.

Shirley, Ill., April 22.

Swarming and Gathering Honey.

Bees are doing finely, and gathering honey from locust and other flowers. I had a large swarm to come out yesterday. I bought one colony of bees last September, and now I have two good colonies already. Bees have just commenced working well. I think I will get three or four colonies from my one this year. W. E. YOUNG.

Henderson, Tex., April 23.

Started with Bees from the Woods.

I am so much pleased with the Bee Journal that I want to subscribe for it. I have two colonies of bees that I found in the woods last year in July. We put them into Langstroth hives that a neighbor had whose bees were all dead. They wintered well, and are doing nicely now gathering pollen. There are no bees kept within 8 miles, unless they are wild.

MRS. R. A. FIFIELD.

E. Sullivan, N. H., April 24.

Bees Wintered Very Poorly.

Bees have wintered poorly in this locality. I think it is safe to say 75 per cent. are dead. I have 12 colonies alive to-day out of 24. Some have lost all. I am the best off of any one that I know. Last season was so dry I think the bees did not rear brood as usual,

BEE-BOOKS

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Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages; bound in cloth and fully illustrated. Price,

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Rational Bee-Keeping, by Dr. John Dzierzon—This is a translation of his latest German book on bee-culture. It has 350 pages; bound in cloth, $1.25; in paper covers, $1.00

Bienen-Kultur, by Thomas G. Newman.—This is a German translation of the principal portion of the book called BEES OF HONEY. 16c page pamphlet. Price, 40 cents.

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Convention Hand-Book, for Bee-Keepers. Thomas G. Newman.—It contains the parliamentary law and rules of order for Bee-Conventions—also Constitution and By-Laws, with subjects for discussion, etc. Cloth, gold-lettered. Price, 25 cts.

Winter Problem in Bee-Keeping, by G. R. Pierce.—The author has had 25 years' experience in bee-keeping, and for five years devoted all his time and energies to the pursuit. Paper covers. 50 cts.

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Book Clubbing Offers.

The following clubbing prices include the American Bee Journal one year with each book named. Remember, that only ONE book can be taken in each case with the Bee Journal a year at the prices named. If more books are wanted see postpaid prices given with the description of the books on this page. Following is the clubbing-list:

1. Langstroth on the Honey-Bee	$2.10
2. A B C of Bee-Culture [Cloth bound]	1.80
3. A B C of Bee-Culture [Paper bound]	1.50
4. Bee-Keeper's Guide	1.65
5. Bees and Honey [Cloth bound]	1.65
6. Bees and Honey [Paper bound]	1.25
7. Scientific Queen-Rearing	1.65
8. A Year Among the Bees	1.35
9. Advanced Bee-Culture	1.30
10. Amerikanische Bienenzucht [Germ.]	1.75
11. Bienen-Kultur [German]	1.25
12. Rational Bee-Keeping [Cloth bound]	2.00
13. Rational Bee-Keeping [Paper bound]	1.75
14. Winter Problem in Bee-Keeping	1.30
15. Thirty Years Among the Bees	1.30
16. Bee-Keeping for Profit	1.15
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18. Poultry for Market and Profit	1.10
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21. Our Poultry Doctor	1.10
22. World's Fair Women Souvenir	1.50
23. How We Made the Old Farm Pay	1.15
24. Green's Six Books on Fruit-Culture	1.15
25. Garden and Orchard	1.15
26. How to Propagate and Grow Fruit	1.15
27. Rural Life	1.10
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In the following Premium Offers the full $1.00 for the Bee Journal one year must be sent us for each new subscriber secured, and each new subscriber will also receive a free copy of Newman's "Bees and Honey," bound in paper, except where the sender of the club is a new subscriber himself—he would be entitled only to the premium book, and not "Bees and Honey," also.

For 4 new subscribers, No. 1 in the list of books; for 3 new subscribers, your choice of Nos. 2, 4, 5, 7, 10, 12, 28; for 2 new subscribers, your choice of Nos. 3, 6, 8, 9, 11, 13, 14, 15, 22, 30; for 1 new subscriber, your choice of Nos. 16, 17, 18, 19, 20, 21, 23, 24, 25, 26, 27, 29.

and my bees worked on oak trees and stored a black substance (I do not know what to call it) that gave them the dysentery. Am I right? I still hope for the future. I winter my bees in a cave.

ERASTUS BOWEN.

Columbus, Wis., April 28.

Did Not Winter Well.

My loss in wintering was 2 colonies out of 10, on the summer stands. Bees have not wintered very well in this section. My remaining colonies are strong, have been gathering pollen since the 17th, and have some sealed brood. GEO. MCCULLOCH.

Harwood, Ont., April 22.

Prospects Not Good.

It is very dry here. Not good spring prospects for bees. CURTIS B. ELLIS.

Milan, Ill., April 23.

Expects a Good Season this Year.

My bees did fairly well last summer, but the cold spring is keeping them back, but they are carrying in a great deal of honey now. I think this will be a good season for them. I am a florist, and the greenhouses are in a constant buzz. I had 100 colonies of bees, but the winter of 1893 I lost all but 13. ANDERSON HYER.

Washington C. H., Ohio, April 26.

Wintered in Splendid Condition.

My bees came through in splendid condition, wintered on the summer stands in chaff hives. W. S. YEATON.

Sioux City, Iowa, April 26.

Small Loss in Wintering.

The American Bee Journal is greatly improved in its new form, and it seems indispensable in apiculture. Bees have wintered well, although it has been a severe winter on everything else. My losses were about 5 per cent. ALEX G. AMOS.

Delhi, N. Y., April 27.

Good Honey-Flow Expected.

We had a very hard winter in eastern Pennsylvania. Many bees are dead, as they could not fly out for nearly two months. I wintered 10 colonies on the summer stands, of which 9 came out all right, and in as good condition as could be expected. One was dead, and no doubt was frozen to death. It was full of stores, but too weak. Bees are carrying pollen now very busily. Fruit-trees have commenced to bloom, and I expect a good honey-flow.

P. W. FLORES.

Dillingersville, Pa., April 27.

Prospects Good—Bee-Paralysis.

We have every prospect of a bountiful harvest. In fact, it may be one of the great honey years, but as about 75 per cent. of the bees died last season, there will not be a great amount secured.

I have given phenol and carbolic acid a thorough test as a cure for paralysis, and believe it to be no more account than so much water. I have just lately changed all the queens, and shall note results.

C. W. DAYTON.

Florence, Calif., May 1.

Iowa in Bloom—Father Langstroth.

Never have we had such a nice early spring, such nice warm weather and nice showers. Everything is in bloom, and our bees are happy and prosperous. My 50 colonies did not winter as well as usual. They consumed an unusual amount of stores, and came out of the cellar in a weak condition.

As usual I have Father Langstroth's name on as good a colony as there is in the yard; he gets the product of that colony when sold. Bee-keepers, try and give Father Langstroth something. You will certainly feel well after doing a good act, and God will certainly prosper you.

E. J. CRONKLETON.

Dunlap, Iowa, April 29.

The Spraying "Did Up" the Bees.

There is the largest fruit-bloom here I ever saw, and rich with honey, but the poison used in spraying the trees "did us up," while we ought to be getting surplus.

Macomb, Ill., May 1. J. G. NORTON.

Early Swarming—Bees Doing Well.

I had two swarms of bees—April 22 and 29—both from the same hive. Who can beat that for this climate? Bees are doing well this spring so far. J. C. BALCH.

Bronson, Kans., May 2.

Swarming and Gathering Honey.

My bees have been swarming for two weeks—four issues. I will hive one more in order to get my empty hives filled with bees, and that will make 26 colonies. I will work them for comb honey the balance of the season. I had a swarm in April—first since 1877. The weather continues good so far. Should nature work on favorably, we will reap a good honey harvest during this season. Our spring blooms were backward, but they have been fruitful of honey. Poplars have been in bloom for a week. The bees have stored satisfactorily. Some small boxes are nearly full, that will hold 22 pounds. Honey-dew has glittered some on hickory leaves. If the warm weather remains, it will prevent its flow.

Auston, Ala., May 5. JOHN M. RYAN.

Convention Notices.

ILLINOIS.—The spring meeting of the Northern Illinois Bee-Keepers' Association will be held at the residence of H. W. Lee, in Pecatonica, May 21, 1895. It will be held one week later if it is a stormy day.

New Milford, Ill. B. KENNEDY, Sec.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association, to be held in the city of Ft. Scott, on Thursday, June 6, 1895. Everybody is invited and all bee-keepers are urged to come.

Bronson, Kans. J. C. BALCH, Sec.

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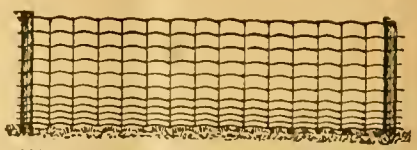
This department is only for your "Wants" or bona-fide "Exchanges," and such will be inserted here **at 10 cents a line** for each time, when specially ordered into this department. Exchanges for cash or for price-lists, or notices offering articles for sale, will not be inserted here—such belong in the regular advertising columns, at regular rates.

TO EXCHANGE—Silver-Spangle Hamburgs for Golden-Spangle Hamburgs.

19A2 WARREN COLLINS, Indianfields, N. Y.



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Honey & Beeswax Market Quotations.

CHICAGO, ILL., Apr. 18.—The supply of comb honey is very light and looks as though all would be sold, unless it be some California that is being spread upon the street. Best white comb brings 14c.; dark, 8@10c. Extracted, 5½@7c., according to quality, body, flavor and package.

Beeswax, 28@30c. R. A. B. & Co.

KANSAS CITY, Mo., May 8.—The demand for comb honey is light. We quote: No. 1 white 1-lbs., 15@14c.; No. 2, 12@13c.; No. 1 amber, 11@12c.; No. 2, 10c. Extracted, 5½@7c.

Beeswax, 25c. C. C. C. & Co.

CINCINNATI, O., Apr. 19.—Demand is quiet for all kinds of honey, with a fair supply. We quote: Best white comb, 12@14c. Extracted 4@7c., according to quality.

Beeswax is in good demand at 25@31c. for good to choice yellow. C. F. M. & S.

CHICAGO, ILL., Mar. 18.—Demand is good for all grades of honey excepting dark comb. We quote: Fancy comb, 15c.; No. 1, 14c. Extracted, 5@6½c. J. A. L.

PHILADELPHIA, PA., Apr. 1. — Choice white clover honey is getting very scarce at 14c. Dark and poorly filled sections, 8@10c. Demand is falling off on extracted, prices ranging from 4½@7c. Strictly pure white clover very scarce at 10c. Beeswax arriving more freely and selling at 30@31c. W. A. S.

NEW YORK, N. Y., May 6.—The market for comb honey is over. We cleaned out all of our stock of white but have some buckwheat yet on hand. Market on extracted is quiet, with sufficient supply to meet the demand. We quote: White comb, 11@12c.; dark, 8@9c. Extracted, white, 5½@6c.; Southern, 50@55c. per gallon. Beeswax firm and in good demand at 32@33c. H. B. & S.

BUFFALO, N. Y., Mar. 16.—The honey market is getting quite well cleaned up here. We quote: Fancy, 13@14c.; choice, 11@12c.; buckwheat and commoner grades, 7@8c. Extracted is in very light demand here, and we would not advise shipments. B. & Co.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

J. A. LAMON, 43 South Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 120 & 122 West Broadway.
CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.

Kansas City, Mo.

C. C. CLEMONS & Co., 423 Walnut St.

Buffalo, N. Y.

BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

Philadelphia, Pa.

WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

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Thin Surplus	52	49	48	47
Extra-Thin Sur.	57	54	53	52

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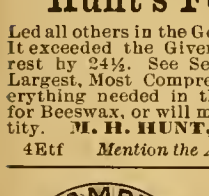

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J. M. Jenkins, Wetumpka, Ala.

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Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

What Size of Frame and Brood-Chamber Would You Use?

Query 971.—1. With the knowledge you now have of bee-keeping, and you were just starting in the business, what size of frame and number would you use in the brood-chamber?

2. Would you use a single, large brood-chamber and a division-board, or a small one and tier up?—Minn.

Dr. C. C. Miller—1. I'm on the fence. 2. Still on the fence.

R. L. Taylor—1. Those used in the New Heddon hive. 2. The latter.

E. France—1. The Standard Langstroth frame—8 frames. 2. Tier up.

G. M. Doolittle—1. The Gallup size 10¾x10¾ inches, inside measure. 2. The former.

W. G. Larrabee—Ten Langstroth frames. 2. A large brood-chamber with division-board.

Jas. A. Stone—1. Langstroth frame, 10 in number. 2. The size indicated in 1, and no division-board.

H. D. Cutting—1. In my locality I would use 8 standard Langstroth frames. 2. A large brood-chamber.

Mrs. L. Harrison—1. I would use the Langstroth frame, 8 to a hive. 2. I would use, and use now, a single brood-chamber.

Rev. M. Mahin—I think I would use frames 14x12. 1. I would use a large brood-chamber and a division-board when necessary.

J. E. Pond—1. Regular Simplicity Langstroth, 10 frames. 2. I would use a single brood-chamber. "Heddon splits" are not to my taste.

Chas. Dadant & Son—1. We use a frame 10½x18, inside, 10 frames to the hive. 2. We use a large brood-chamber and division-board.

Dr. J. P. H. Brown—1. I should use a frame the size of the Langstroth, and 9 to 10 in the hive. 2. If the honey-flow was great, I would tier up.

Eugene Secor—1. For my locality a Langstroth frame with 8 in the brood-chamber. 2. With an 8-frame hive there is little need for a division-board.

P. H. Elwood—1. Our frame is 11¾x17, outside. For some reasons, in this locality, if it was a couple of inches shorter I would like it better. 2. Single.

C. H. Dibbern—1. I should use a frame 5⅛x20 inches, inside measure. 2. I would use a single chamber for comb honey, and two or more for extracted.

Prof. A. J. Cook—1. I should use the regular sectional hive. If I had no hives, 2 small and tier up. 2. If I did not use the Heddon I should use the 8-frame Langstroth.

Allen Pringle—1. I would use what I am now mostly using, viz.: 8 (and some 10) frames of about the Langstroth size. 2. I would use the 8 or 10 frame hive, and tier up for extracted honey, and the 8-frame and Heddon hive for comb honey. I like the Heddon hive for comb honey after the swarming commences. I put the swarm in a single section of the brood-chamber, confine the queen there, and tier up the section supers. But if I intend to winter such a colony, I give the queen the other section during the fall flow.

B. Taylor—1. Ten frames, 13½ inches long, and 10 deep. 2. A full brood-chamber to hive first swarms in. After the white honey harvest was over I'd add another hive to be filled with winter stores.

J. M. Hambaugh—1 and 2.—With my present surroundings I would use the Quinby-Dadant hive for extracting, and the Langstroth-Simplicity for comb honey, both 10 combs to the hive, with division-board.

Rev. Emerson T. Abbott—1. An 8-frame hive for comb honey with a Langstroth frame. For extracting, a larger hive and a deeper frame. 2. I do not want any division-board nor any other traps in the brood-chamber.

Wm. M. Barnum—1. I would use the Langstroth frame: a Simplicity story-and-a-half (case) hive—no more super frames for me. I think it would be a 10-frame size. 2. I would use the division-board—if it were necessary.

G. W. Demaree—1. For the sake of uniformity, I would use the Langstroth frame, and 10 frames in the brood department. If your locality favors a smaller number of frames you can reduce the number by the application of division-boards. 2. No management will give as good results as the *tiering* system.

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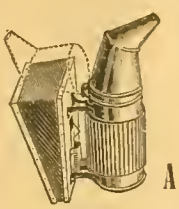

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AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

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35th Year. CHICAGO, ILL., MAY 23, 1895. No. 21.

Contributed Articles.

On Important Apiarian Subjects.

Foul Brood Spread by Bees Robbing Foul-Broody Colonies.

BY WM. M'EVOY.

On page 100 Mr. Graden takes the ground that "when a colony infected with foul brood is robbed the infection is not carried in the honey."

It is over 19 years since I discovered that foul brood was spread by robber bees, and that they carry the disease in proportion to the amount of diseased honey that they convey to their own hives. I know one bee-keeper that lost 120 colonies through his bees robbing some foul-broody colonies that his neighbors brought into his locality. I know another bee-keeper who lost a very large apiary through his bees robbing out a few foul-broody colonies that one of his neighbors brought near his bee-yard. I could give many such cases and prove beyond every shadow of doubt, by many men in Ontario, that they got foul brood into their apiaries through their bees robbing foul-broody colonies kept by their neighbors.

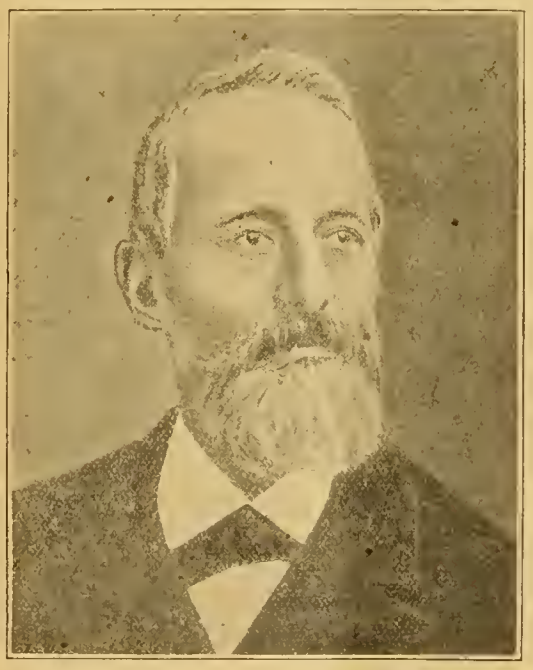
Before 1890, foul brood was spreading through the Province of Ontario at an alarming rate, and to make matters a thousand times worse, we had men selling many foul-broody colonies and shipping them to many parts of Ontario. Then as soon as these foul-broody colonies were robbed by the bees from the surrounding apiaries, the disease began breaking out in them.

In September, 1889, Mr. Gemmill wrote to me that it would only be a question of time when all the best bee-keepers of our country would be driven out of the business, if we didn't get an Act passed to stop the selling of diseased colonies of bees, and to prevent careless neighbors from keeping foul-broody colonies, which were fast spreading the disease to the fine apiaries by the bees robbing the diseased colonies. He also said that he was going to bring this matter before the Ontario bee-keepers' convention, in Belleville, and push it until he got an Act passed to stamp out foul brood.

When the bee-keepers met in Belleville, in January, 1890, Mr. Gemmill urged the convention to act promptly in this matter. It was then moved by Mr. McKnight, secooded by Mr. Darling, and carried, that Mr. Pringle and Mr. Gemmill be a committee to wait on the Minister of Agriculture, and get an Act passed for the suppression of foul brood.

The Act was passed on April 7, 1890, and I was appointed Inspector soon after. I knew from the many private letters that I had received for years from different parts of the Province, that there was a great deal of foul brood in Ontario. But when I went to work to examine the apiaries in many counties, I became astonished at finding so very many bee-yards in a horrible state with foul brood. I set to work at once to straighten things up in the most peaceful way.

With the help of Mr. Pringle, Mr. Gemmill and Mr. Picket (the last three Presidents that I served under), we got the foul-broody apiaries cured by wholesale. I warned the bee-keepers everywhere to do all the handling of the diseased combs and curing of their foul-broody colonies in the evenings, so as not to have any robbing done, and to give the bees a chance to settle down nicely before morning. In some apiaries many of the diseased colonies could be cured by removing their combs in the evening when the bees are gathering honey and then left to build their own. But where an apiary is badly diseased, and the bees have a quantity of unsealed honey stored in the brood-nest in diseased cells, they cannot be cured in the time of a honey-flow by putting the bees into empty hives to build their own combs. Because when the combs would be removing, the bees would rush right into the unsealed honey in the stain-marked cells (diseased cells) so readily gotten at without any uncapping, and then fairly gorge themselves with the very worst of diseased honey. Then, as soon as the bees had a little comb made, they would



Dr. Adolphus de Planta—See page 333.

store part of the diseased honey in it, and then the disease would break out again.

Where foul-broody colonies are very badly diseased, and weak in bees, the bees will, in the time of a honey-flow, store a quantity of honey in the brood-nest, and a good deal of it right in the cells where the foul-broody matter had dried down and left its stain-mark on the lower side and bottom of the cells. I have found hundreds of colonies in that condition, and I had to see that every colony in all diseased apiaries was perfectly cured or burn them.

I also knew that nothing but a thorough cleansing process would be of any use in curing all the foul-broody apiaries that I would meet with on my rounds through the Province. I told the bee-keepers everywhere to go to work in the honey season and remove the foul combs in the evenings, and put in frames with comb foundation starters; and at the end of four

days the bees would have drawn out the starters and stored most of the diseased honey taken with them from the old combs; and to remove the starters the fourth evening, and give full sheets of comb foundation. By the time the full sheets of foundation were drawn out, the diseased honey would be used up, and then a perfect cure would be made in every case so treated. Then by making wax out of the new combs that were made out of the starters during the four days, and the old foul combs, every thing would be all right with every colony in nice, new combs made out of foundation.

I sent some foul-broody combs with honey in, to Dr. Howard, of Fort Worth, Tex. He uncapped the sealed honey, and carefully dipped the honey out of the cells without disturbing the cell-walls, and then with a microscope he examined the honey and found the living germs of foul brood in it. Will any man in the world say that if a colony of bees were to rob the combs of the honey that Dr. Howard examined, and then feed it to their larvæ, that it would not give them foul brood at once? Woodburn, Ont., Canada.

What Dr. Miller Thinks.

Large Hives.—After several years of experiencing the pleasure of handling 8-frame hives, it would seem a hard matter to go back to the 10-frame hives of previous years. So it gives me a pang of discomfort to read on page 293 a word from Chas. Dadant, "We do not, and in fact cannot, depend upon natural swarming when running for extracted honey with large hives." For bad as unwieldly hives are, swarming is still worse.

Time of Extracting.—Dadant says: "When the honey-yield is over." E. France thinks that will not do for some who would have their crop of white honey spoiled by inferior honey before and just after the white harvest.

Air for Winter.—I think Dr. Gallup has struck a good point on page 294, where he thinks bees have wintered badly because the hives were too close. I was once surprised to find a man who was very successful in wintering bees in box-hives, and he had each hive on four blocks, so that all winter long there was a space of half an inch under all four sides of his hives.

Taking off Honey.—Bro. Abbott says, on page 294: "After the honey is in the supers and capped over, the longer it can be left on the hive the better it will be." I think that's true, if you are after some good honey for your own table without regard to looks. But if you want honey that will bring the most money on the market, then the rule is, "The longer you leave honey on the hive after it is sealed over, the worse it will be."

Talking Back.—I think the "Old Reliable" for May 9 has enough "talking back" in it to suit even F. L. Thompson. I must confess it makes interesting reading, but I give F. L. notice he better not talk back to me!

Taking off Sections.—Bro. Abbott says, on page 294, that sections are sure to have little holes bitten in the cappings when taken any other way than by the use of bee-escapes. Not in this locality. I've taken off thousands of sections without holes in the cappings long before escapes were known. In some cases escapes are good things, but I don't always use them, by any means.

Unqueening Colonies.—Out of respect for the originator of the word, Father Langstroth, I prefer "unqueening" to "dequeening." But whether it be dequeening or unqueening, I want to say to F. L. Thompson regarding his paragraph on that topic on page 296, that if he often takes a notion to lay aside his usual clear way of putting things to mix up his words so darkly as he has in that paragraph, he may expect to see a number arise and do some vigorous "talking back." Or is it that I'm a little slow to spell out his meaning?

Flat Hive-Covers.—Edwin Bevins has a good cover with that single board and its two heavy cleats, only when a board takes a notion to twist—I mean twist, not warp—then a cleat of cast-iron won't stop its making a bad fit.

Working Long Hours.—I see trouble brewing between B. Taylor and Rev. E. T. Abbott, on page 301. The form of the first named gentleman certainly doesn't show that his habits lay much fat upon his bones, and I'm with Bro. Abbott in trying to take things as easy as I can. Nevertheless, the man who isn't willing when the busy time arrives to get up at an unseemly season and work over hours, better quit bee-keeping before he ever begins.

Tin Separators.—On page 306, H. V. believes that a coating of beeswax will prevent travel-stain of sections. It would be interesting if H. V. would tell us the reason of this, and whether his belief has been established by long observation. Marengo, Ill.

Automatic Swarming—Queries and Comments.

BY G. M. DOOLITTLE.

A correspondent sent me two or three questions to answer, and they proved to be of so much interest to me that I have concluded to give them to the readers of the American Bee Journal, together with some comments thereon.

1st. "It is well known that when a hive is full of bees, so that they begin to think of 'laying out,' they will crowd into an empty space which may be about the hive, much sooner than they will go on the outside of the hive. Taking advantage of this fact, suppose that as soon as the sections are filled with bees, they being well at work, and before the swarming-fever comes upon them, we bore a two or three inch hole in one side of the hive, and on the inside of the same put a piece of queen-excluding metal. Next we will bore a corresponding hole of the same size in an empty hive, cover the same with queen-excluding metal, and set this empty hive right up against the other having the bees in it, so that the holes match, and then put a queen-cell in this empty hive. Now the point I wish to know is, will there not in time be a new swarm of bees in that empty hive?"

That this will work just as outlined above I have my doubts, but I think there may be something in it with some modifications which may be of benefit to the bee-fraternity. From past experience I judge that, did the bees go into the empty hive and care for the cell until it hatched, the queen on going out to meet the drone, would, on her return, enter the wrong hive and be killed, thus spoiling our work. But what is there to hinder placing a comb of honey and one of brood in the empty hive, and then giving the queen-cell? I would now warrant the bees from the old hive to go through the queen-excluding metal, take care of the brood and cell, and care for the queen just the same as if she were in an isolated hive or nucleus, when in due time she will become fertile and go to filling the combs with eggs. From all of my experience in the past, in rearing queens as given in my book, in having them reared above queen-excluding metal by the thousand, while the old queen was doing her duty below, I am just as sure that this plan would work as if I had tried it and proved the same.

2nd. "By using the plan which I have outlined above, will it not prevent the original colony from swarming? If so, this will do away with some one to stay at home all the while to watch for swarms during the swarming season, besides proving a bonanza to those having out-apiaries which they wish to work for comb honey?"

Well, as I said before, I do not think it would work as the questioner gives it, but by using the suggestions given as I have explained, I see no reason why it should not stop swarming entirely. As soon as the young queen gets to laying, or before the old colony is a very strong one, take more combs of brood from it and put in their places frames of foundation or frames of worker-comb, so they will have no chance to build drone-comb, putting the brood thus taken out over into the hive having the young queen. Sections should now be placed over the part of the new hive where the brood and combs are, so that in no case the bees lack for room to store all the honey there is coming in; and I would have these sections in every case filled with foundation, so that the bees would have no excuse for any desire to swarm by being loth to build comb. Occasionally, or as often as the out-apiary is visited, move more frames of brood over to the new hive, putting frames filled with foundation in the place of the frames taken out each time until the new hive is full, always putting on sections as the bees seem to require. If I am correct in thinking the above will do away with swarming, we shall have something of great advantage, at least to all those working out-apiaries.

3rd. "Will a colony thus managed store as much honey as they would had they been kept in the old hive, and by some means not allowed to swarm?"

If we had that "*some means*" which would allow the bees to work with a will all summer long, with no desire to swarm,

then I should say that they would produce more honey in the original hive, and with only one queen; but inasmuch as bees are, as a rule, determined to swarm where worked for comb honey, it looks to me as if the above would give more honey than could be obtained either by letting them swarm, or so throwing them out of their normal condition by manipulation so that swarming can be prevented.

All cutting of queen-cells, caging of queens, etc., to prevent swarming seem to put the colony in an abnormal condition, so that the work that they do while so placed seems to be done with a protest; hence it often happens that the season is mostly consumed by the bees sulking the time away, instead of their working with a will. Such a state of affairs always results in a small crop of honey, and, as a rule, that which we do get is of poor quality. If there is a short-cut route to prevent swarming, and at the same time secure a good yield of a good quality of honey, which can be used at any out-apiary, it will be a great boon to all those wishing to keep bees more than what the home-yard will accommodate.

Borodino, N. Y.

Facts About Bees and Strawberries.

BY REV. M. MAHIN, D. D.

I have noticed in the American Bee Journal some discussion between Rev. Emerson T. Abbott and Hon. Eugene Secor on the subject of "Bees and Strawberries," and as we all want "facts" I will give some of the results of my observation on the subject.

1. It is a fact that bees perform a very important part in the pollenization of the pistils of many plants. Without honey and pollen gathering insects of some kind we would have no melons, cucumbers, pumpkins or squashes. And doubtless the seeding and fruiting of all flowers visited by the bees are materially helped by them. No well-informed person will call these facts in question.

2. It is a fact that in this region of country honey-bees very rarely touch strawberry blossoms. I have had a strawberry plantation in close proximity to my bee-hives, and have made frequent and careful observations, and to the best of my recollection I never saw three bees at a time among the strawberry plants, though the bloom was abundant. It may be that on a different soil, and in different climatic conditions, bees may work on strawberry blossoms, but they do not do it in this part of the country. There are, however, other insects that do visit the strawberry blossoms, and do for them what our bees do for many other flowers. But *Apis mellifica* is of no practical advantage to the strawberry grower. This is a fact, and facts ought to be recognized.

3. It is a fact that strawberry growers do not plant varieties that are exclusively staminate. They would be very foolish to do so. From my boyhood I have been familiar with the fact that there are wild strawberry plants that never bear any fruit, but I have never known them to be cultivated.

Bro. Abbott says: "The rows of vines producing stamens only bear no fruit, of course, and are of no value only as fertilizers." Why should ground be given to rows of plants which produce no fruit, when such varieties as Gandd, Jessie, Captain Jack, Parker Earl, Wilson, and many others, furnish abundant pollen, and produce very fine crops of berries besides? Bro. Abbott is certainly mistaken in supposing that any exclusively staminate strawberry plants are cultivated. It may not be scientifically correct to designate as staminate those varieties that have both stamens and pistils, but it is done in all fruit catalogues, and by all writers on fruit-culture.

New Castle, Ind.

Bee-Keeping in the Bermuda Island.

BY W. K. MORRISON.

Myself and bees landed here on Feb. 22, and despite their many hardships were all alive, and soon got down to business. All have heard of these lovely Isles, but definite knowledge is rare. The area of the group is 20 square miles, and about 22 long—hardly enough room for one enterprising bee-master; but just think how nice for queen-rearing—no foul brood, no dysentery, and no blizzards. The highest temperature in summer is 86°.

The chief crops are lilies, onions and potatoes, but bananas, melons, squashes and pawpaws are grown for home consumption; in fact, almost anything seems to grow. Among trees the cedar is monarch of all, and is idolized by the natives for lack of a better. Strange as it may seem, the finest land is uncultivated, being marsh land, easy of drainage. Here is a chance for those smart Canadians we have been told of lately, for British born subjects only can own land. Strawberries do well, and fetch prices that only editors and millionaires are willing to pay!

Mr. Root might come and see the finest roads in all the world, over 100 miles of them, smooth as asphalt, and laid amidst enchanting scenery.

Next to Gibraltar, this is the most important military post in the world, and literally bristles with guns and other implements of war. But Bermuda has higher claims for distinction, for it has no beggars and no paupers, and it is studded with churches and schools so numerous that I am puzzled to know where they get the money to sustain them. The people speak excellent English, and the ladies have a speech that is certainly charming to the ear, and fills the hearts of their American sisters with despair. It need hardly be said that the trade relations are chiefly with Uncle Sam, the colony having a tariff of 5 per cent. for revenue purposes only.

Altogether, I am happily situated in almost every way. The air is remarkably clear, and also soft, and strolling along these superb roads in the clear moonlight, mere existence is a delight, and one gets a foretaste of that "Beautiful Valley of Eden." But it is not always thus, for terrific winds sweep over the Islands, and Old Atlantic is lashed into a high fury.

It would take some space to elaborate the lily business, and needs a page by itself, but if any of the fraternity of beemen desire a few bulbs for gardening I will buy what they want, or would be glad if friends would send me seeds of honey-plants for an exchange. They are growing here that lovely plant—the "Freesia"—and the bees love it as much as men do, for its fragrance, borne on the breezes, is never to be forgotten; but a native oxalis they simply get wild over, which I may describe at a future time.

Now about my last article, on page 36, I have a word to say. Mr. Miles (page 132) seems to think that that dovetail will be hard to make. It's not so. Mine were made by band, and are all right. If they are made as accurately as my flat hive roofs, they'll do. The "key" should be made of hardwood, and have a shaving taken off its broadsides so as to not drive the pieces apart. The hive should be put together in a box form, and all joints glued, then you will have a hive to be proud of, and last a life time.

I have recently seen a remarkably useful book on extra-tropical plants suitable for culture, and as it designates the honey-producing ones, it should be in the possession of every bee-keeper. It gives a succinct account of a vast number of plants suitable for culture outside the tropics, and is published by the Victorian Government. It may be procured from John Ferris, Government Printer, Melbourne, Australia. Its probable cost may be about $2.

Devonshire, Bermuda Isles, April 2.

Planting to Help Out Bee-Pasturage.

BY W. H. MORSE.

Planting for honey seems to be unsatisfactory to the many that have tried it, and quite a number claim a total failure, but no one will dare deny that we can improve our locality. The majority of the writers in the Bee-Keepers' Review seem to think things are all going to be paralyzed in the future in the producing of honey. Well, we are getting the basswood and other timber cut by the wholesale, but if the forests are cleared it cuts that supply off, but another springs up to take its place, and what is to hinder planting to get results (answer), for the other fellow's bees to gather the nectar? Well, think that way, and you are sure to claim bee-keeping doesn't pay finally, but, say, if you plant a tree, see to it that it is a honey-producing variety; and if clover, don't scatter sweet clover in a neighborhood which is kept in good order, but be judicious in your selection. Go into a deserted part, if there is one, and give the sweet clover a chance to run the weeds out, not forgetting to add a little catnip—it is a fine plant for waste-places, it is as tenacious as sweet clover, and when once sowed it will take care of itself. But if the neighborhood has no place for such plants, give it a liberal dose of white clover seed, but don't go to the pasture to sow it, as the the grass will in most cases run it out, but utilize the sides of the roads, or any bare and exposed position.

I will mention an incident in regard to white clover which I noticed in particular the last two summers. Not more than 100 yards from my bees there is a steep rise in the land, and no shade in any direction, and this land was covered with white clover. About the same distance in another direction the land has some trees growing on it, and being lower, it is

considerably more moist than the higher land; and it, too, is covered with white clover, but I failed to find any bees working on it, while the clover in the exposed position was covered with bees.

Now, if you are going to sow any of these seeds, pick your time for it. As soon as the frost is all out of the ground, and we get a storm of rain, lose no time in sowing, as the seed will then get a chance to be covered with soil. But remember, chickens are fond of clover seed.

If you are going to plant any basswood trees, be careful not to get them sun-scaled on their trunks, for if they are, the borers will find them and frustrate your attempts to get fine trees. To keep them from sun-scalding, wrap them with old gunny-sacks cut in strips four or six inches wide, or shade the trunks anyway you can for the first few months after planting. I am alluding to the Western States where the sun gets such force previous to the trees getting a healthy start. Above all, don't be too kind to your trees. If the soil is poor, don't mix any better soil with it and expect the trees to do well by it, as it is positively injurious to them. Dig and plant in the same soil that you threw out, treading in firmly, and leave the surface concave around the trees to give them more chance to catch the rains.

Now I want to tell you not to be discouraged with these things. I have practiced horticulture for 21 years—all its branches—and during that time I have planted thousands of trees in England, and in this great and glorious State of Nebraska I have spent nine years, and still planting. Say, *don't* believe we are all dying for want here. Last year was the first year that I have seen a failure, and last year the farmers got half a crop; but as to the sandhills part of the State, I have nothing to say, only that I don't want any of that part of the State. But in the fertile part trees do well after they get established, and make a rapid growth. We are classed as a treeless State, so if any of you fear to plant trees, I say take courage and try. Don't believe you cannot profitably improve your bee-pasture, but study how, and I am convinced success will attend your efforts.

But let me give a word of caution. If you buy trees or seeds, buy them direct from the firms that have a reputation to keep up. Of course, around our homes we can plant fruit-trees and get the double benefit, and if you care to have a few shrubs to beautify home grounds, use "barberry vulgaris," and give it plenty of water; and if you have a sunny corner where everything will dry out and die, plant "lycium," and let it have its own way. I know of no shrub or plant that can come anywhere near this for flowering. I have some plants of it, and my bees put in from May 18 until the end of August working on it. But there is no end of material to plant, and if we plant trees and permanent plants we are conferring a benefit on mankind as well as ourselves. Florence, Nebr.

Rapid Increase and Early Honey in California.

BY DR. E. GALLUP.

Now if any of you Eastern people are congratulating yourselves that California is going to produce but very little surplus honey this season on account of the loss of bees, etc., don't flatter yourselves on that head. You may be mistaken.

I was talking with Mr. Oderlin, who resides here in Santa Ana, and runs a bee-ranch up in the foothills. He says his bees commenced swarming March 20, and have kept it right up to date (April 27). He commenced extracting April 2, has taken out one ton, and the hives are full again for the third extracting. If nothing prevents, he will have a ton of honey in Milwaukee, Wis., by May 12. How many are going to beat that, either North or South?

California vegetation and flora are immense. The foothills and mountains are covered with a vast variety of wild or natural flowers, which would astonish any person not acquainted with this climate and its capabilities. It must be seen to be appreciated, or even comprehended. Bees were never in better condition so early in the season than they are now. This is the universal conclusion so far as heard from. One bee-keeper tells me that he not only has his original number of colonies, but is away ahead, and all are in the very best possible condition; and that, too, after a loss of about one-half the past year.

If you will read Mr. Doolittle's article, on page 246, you will see that it is just fun, as I said in a previous article, to build up and make increase when one has the ready-made combs, in this climate.

Mr. Oderlin's increase, this year, was all from natural swarming, and he has put the greater proportion of the swarms back, as he did not want so much increase. Recollect that the season is earlier in the foothills, or low down, than it is higher up in the mountains. But the season lasts, or continues, later in the higher altitudes. Now recollect another phase of California bee-keeping, that is, that the plow or stock can never interfere with the mountain apiary, as many of the ranges are inaccessible to both.

When one can select a location with foothills on one side and high mountains on the other, the bees take advantage of both the early and late pasturage or honey-flow.

There, I believe that I have answered inquiries by different ones, in the above article.

Santa Ana, Orange Co., Calif.

The Length of Life of the Bees.

BY H. P. WILLSON.

Mr. Thomas G. Newman says, in his book entitled "Bees and Honey," that "the natural life of the worker honey-bee does not exceed six months." This seems to be the opinion of many bee-men—in fact, of all, so far as I can read, but it seems to me to be contrary to facts. Take our own bees, for instance. On Sept. 16, 1894, there was a frost that killed all the bee-forage in this part of the country. The bees gathered no more honey, and of course the queen would soon stop laying eggs. There were certainly no eggs laid after the first of October. If so, then the last young bees of the season would be out about Oct. 21; but we will suppose the last hatching would become full-grown bees by the first day of November. (I am confident from examining the hives that no brood was hatched later than the first of October, if so late.)

The bees were put into the cellar Nov. 19, 1894, after a good deal of cold weather, and were taken out of the cellar April 6 and 7, 1895. At that time, and for several days after, there was no brood in the combs, that I could find on examination. The cellar was cold, and of course the queen would not lay while the bees were huddled together to keep warm. Suppose the queen commenced laying as soon as the hives were taken out of the cellar, give her three days to lay the first lot, and it would then be April 10: and 21 days would extend to May 1; but these bees would not go out to work for 16 days later.

If the life of bees does not exceed six months, the old bees would all be dead by the first of May, and not a bee left to work outside the hive. Such will not be the case, however. There will be plenty of bees at work, and bees, too, that were out last fall. I have no doubt that many of the bees now in the hives were matured last August.

Bathgate, N. Dak., April 24.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Using Hives Wherein Bees Have Died.

Yes, Doctor, I ought to have been scolded a little bit for my negligence, but you answered in the right paper. (See page 282.) Your answers are satisfactory, but I want a little more information:

1. Will swarms accept the hives where bees have died in in them?

2. If not, what can I do to make the bees accept them? I also want to utilize my hives. C. L. C.

Glen Rock, Nebr.

ANSWERS.—1. Yes, I think you will find no difficulty.

2. If there is any trouble at all, it will be because the old hives are dirty, particularly where colonies have died in them which were badly affected with diarrhea. The remedy is obvious. Clean them. Scrape off the dirt, or wash and scald off.

Was It the Best Under the Circumstances?

I got up early this morning and went out to look at the bees. It was just as I expected with these little 8-frame hives. The bees in some hives had become so numerous that some of them had to sleep out-doors. I found many bees clustered on the alighting-place. I went to work and re-

moved the outside packing and at noon removed the cushion and burlap. Every space between the frames seemed to be solidly full of bees, and they had started to build comb between the burlap and the frames where the Hill's device had left a little open space. Fruit-bloom was never more abundant than it has been here for several days, and the weather has been everything that could be desired.

Not knowing what else to do, I put on the surplus cases having many sections with drawn or partly-drawn comb. I feared that if the bloom should continue abundant for a few days more the bees might get the swarming-fever, and I do not want any swarms now. If the bloom continues, and the weather does not turn wet and cold, I may get some honey in the sections. If not, I think the bees will be better for having more room. Have I done the best thing that could be done under the circumstances? The unexpected is always happening in apiculture. E. B.

Leon, Iowa, May 2.

ANSWER.—What you have done was a good deal better than to leave the bees as they were, and since you have done it I think I will say it was good, but even for the sake of being good-natured I can hardly say it was the best thing. Those sections are not likely to be filled and finished up in good shape during fruit-bloom, and when they are finally finished they will not be so fresh and nice as if they had been put on later. They however served a good purpose by allowing the bees to have a place to store some surplus instead of crowding the queen with it, but the question arises whether you might not have done still better by giving the queen additional room, or in other words, might it not have been better to have enlarged the brood-nest instead of the surplus room? Did the queen have all the room she could use in those eight frames? Why not put another story under, and let the brood-nest extend down into it, even if you should afterward take away the extra story?

Granulated Honey in Combs—Introducing, Etc.

1. In looking over my bees this spring I noticed that some syrup made out of granulated sugar, which I fed to them last fall, had granulated in the cells. Will the bees clean out the cells, or will I have to give them clean combs?

2. I also noticed that there were some dead bees in some of the cells—they were old bees, and seem to have gone into the cells to get the honey and died there. Please give the cause of their dying in the cells.

3. What is the best way to keep combs partly filled with honey (off of the hive) away from the bee-moth?

4. What is the best way of getting moths out of the combs if they get into them?

5. When is the best time to introduce a queen?

J. R. S.

ANSWERS.—1. The bees will throw out the grains of sugar.

2. I suppose they went into the cells to keep warm rather than to find honey there. They were probably old, and that was as comfortable a place as any in which to die.

3. In previous numbers you will find answers to this question and the next. There is no better place to keep combs so the moth will not trouble them than under a strong colony of bees, letting the bees have open communication with them from above.

4. If there are any big ones, pick them out with a wire nail; little ones you can brimstone. But if you put them under a strong colony the bees will take care of both big and little.

5. That depends somewhat upon circumstances. As a general rule, there will be least trouble and loss during the honey harvest.

A French Naturalist and "He" Bees.

The enclosed on "Bees and their Honey," was clipped from the New Haven (Conn.) Register. Please give the readers of the American Bee Journal your opinion of such "scientists" or "naturalists." G. H. Y.

Wallingford, Conn.

The item referred to by Mr. Y. reads as follows:

"BEES AND THEIR HONEY.—A French naturalist with a mathematical turn of mind has been calculating the work done by a hive of bees. When the weather is favorable, a 'worker,' according to his estimate, makes usually six to ten trips, visiting 40 to 80 flowers and collecting about one grain of nectar. Even when under extraordinary good conditions *he* visits 200 or 400 flowers, the amount collected would not exceed five or six grains, and the collection of a pound would occupy several years. A hive contains 20,000 to 50,000 bees, of which only half are occupied in preparing honey, the rest caring for the young and their quarters. In a good day 16,000 to 20,000 bees can, in six to ten trips, visit 300,000 to 1,000,000 flowers. For this it would be necessary that the locality should be favorable for honey-making, and that the nectar-secreting plants should grow near the hive. A hive of 30,000 bees can then, under good conditions, make about two pounds of honey a year."

I would hardly advise any one to try to straighten out this clipping and reconcile its statements unless he has some desire to be a gibbering maniac. It may be a little new to bee-keepers to learn that "under extraordinary good conditions" bees may visit five times as many flowers as usual. That is, if a large amount of nectar is yielded by each flower, then the bees can visit a big lot of such flowers, and the more they get from each flower the more visits they make. I suppose they get discouraged when the yield is small. When everything is favorable a hive can gather two pounds of honey in a year, and this may seem rather large when it is noticed that it is the he-workers that are mentioned, as "*he* visits 200 or 400 flowers."

Cut-Off Board and Bee-Escape.

Who is the author of the "cut-off board" and the present principle of operating bee-escapes? E. J. C.

ANSWER.—J. S. Reese, Winchester, Ky., I think is entitled to the honor of starting the whole escape business. He used the wire-cloth cone-escape, but he seems to be large-hearted enough to be glad of any improvements that are made. What do you mean by "cut-off board?" Probably the board that is used with the escape. If so, that belongs to Reese.

Doubtless a Case of Laying Worker.

I have one colony of bees in which, when examined this spring, I could find no queen or any brood. I waited a week or ten days and looked again, and found no sign of a queen, but plenty of stores. By this time my weakest colonies had plenty of brood, so I thought it must be queenless, and gave them a comb of brood in all stages. I then waited on them 13 or 14 days and looked again, and to my surprise they had brood in two other frames besides the one I gave them. Now they had three queen-cells, one of which was capped nicely—there was a batch of drone-brood near by the queen-cells; these queen-cells and drone-comb were not on the comb of brood I gave them (I am sure), mind you, so I concluded they must have a queen already. I took out the queen-cells and waited about a week and looked again, and found another queen-cell capped. This colony seemed to have plenty of bees, but did not seem to be working like the others. Were they preparing to swarm, or to supersede the old queen? or what is the matter with them? D. B.

Grand Prairie, Tex.

ANSWER.—By the time this reaches you I think you will find this colony has more than its share of drones, and all of the sealed brood will be not flat but round, like little marbles. That means laying workers, and I don't believe you can do anything better than to break it up at once, giving the combs to other colonies, with bees adhering. Don't mourn if some of the workers are killed. They are old and not worth much.

How to Distinguish Honey-Dew.

Last year the surplus honey was a perfect failure, but the bees went into winter quarters with plenty of stores, but at this date (April 13) full 75 per cent. are dead, with plenty of honey in the frames. The hives are badly spotted. The article on page 231, by C. Davenport, suggests to me the probability that honey-dew may be the cause of the disaster. I would like to be informed by what unerring feature this honey-dew may be distinguished from good honey; and would it be advisable to extract all uncapped honey at the beginning of winter, and supply the deficiency with granulated sugar? Would the capped honey be broken while extracting the soft or uncapped part? H. F. R.

Wadsworth, Ohio.

ANSWER.—I doubt if I can put in words a description of

honey-dew so that a person who had never seen it before could be sure of it. I don't believe I could give such a description of clover and linden honey as to allow a novice to distinguish them. Honey-dew is generally dark in color—I have seen it darker than buckwheat, but not so clear—and it has a disagreeable taste and a rank smell. But that doesn't tell you anything very positively, for some people think linden honey has a disagreeable taste and a rank smell. If any one has a satisfactory description by which one unacquainted with it can readily recognize it, I shall be glad to have them help out.

It is possible to have a heavy yield of the stuff one year, and then not to see a drop of it for years again. Some places, however, seem to be visited with it every year.

Yes, it would be a good plan, where combs contain honey that is little better than poison to the bees, to extract and fill up with sugar. You can extract without disturbing the cells that are sealed. I don't know whether it might not be best to uncap and extract any that is sealed, if it comes from the same source.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

Mailing Drones for Fertilizing Purposes.

"I have a few virgin queens but no drones to fertilize them; can you mail me a few?" Thus writes a correspondent in New York State.

It is no hard matter to successfully mail drones, but I have never known of their being any benefit after their reception. The confinement in the cage, and the tumbling about in the mail-pouch, seem to impair their virile power.

The Honey-Locust for Bees.

This, I think, stands at the head of the list of mellifluous trees cultivated for ornamental purposes. When in bloom, which lasts from one to two weeks, the bees swarm on it from early dawn until dark. They will work on this bloom to the neglect of all other forage. The honey is quite light—much lighter than basswood. The only objection to it as an ornamental shade-tree is its long spires.

Cutting Out Queen-Cells to Prevent Swarming.

DR. BROWN:—Will you kindly give your views as to the feasibility of preventing swarms by cutting out queen-cells every six or seven days? I believe this method has some advocates, but will the bees work as well as if allowed to swarm?

"EASTERN KENTUCKY."

Theory and practice do not always work harmoniously together, particularly when there are a number of collaterals bearing upon the "matter of fact" side of the question. This is particularly so when applied to the theory of cutting out queen-cells to prevent swarming.

To cut out the queen-cells is a very uncertain remedy to prevent swarming with the Cyprians, Palestines, and some other varieties of the honey-bee; and, in fact, it is not always reliable with Italians and blacks. When bees get the swarming-fever, they will often swarm in spite of the absence of cells.

Besides, when cutting out, a cell may be overlooked; and the labor involved, and the time consumed in performing this work in a large apiary, would amount to a large item of expense. Moreover, the constant disturbing and tinkering at a colony during the midst of the honey-flow interferes with the labor of the workers. This is a fact too well established.

Taking one season with another, the bulk of our surplus honey is gathered by the first or prime swarms. Hence, summing up the *pros* and the *cons*, it is best to allow one swarm to issue, and then, in five or six days, cut out all queen-cells but one, which should be the best. By this time the larvæ will be too old to use for others, and the probabilities are that no more swarms will issue from that hive during the season; and if the honey-flow is protracted, the old colony may gather a fair lot of surplus.

Peculiarities of Honey-Producing Flora.

Of the whole round of bee-keeping knowledge, that which embraces the honey-producing plants, seems to be the least understood. Conclusions here are generally drawn too hastily, and consequently erroneous information is freqnently imparted.

Bees at times work on bloom that yields very little honey, and the fact of their presence does not prove that it is valuable for its secretion of nectar. One or two seasons of observations are not sufficient to determine the worth of a plant for honey. There are hundreds of acres of golden-rod, *Solidago*, within range of my bees, and for quite a number of seasons I was under the impression that the honey they were then storing was obtained from the golden-rod. The bees were working on it, but I finally found out that I was mistaken in my conclusions, and that the honey was gathered from a different source. A species of aster was in bloom at the same time; and, by the way, it blooms in my locality from the first of September until killed by the frost. In early morning not a bee could be seen upon it, but they could be seen upon the golden-rod at nearly all hours in the day. Toward noon they would commence working on the aster and keep it up until late in the evening. By Sept. 20 the golden-rod is pretty well out of bloom while the aster is at its height. But as the character and quality of the honey gathered continued to be the same, I found out that I had been giving the golden-rod credit for an article it did not produce. The golden-rod (*Solidago pubescens*) in my location is a poor honey-plant, while it may be good in other places.

The sourwood is considered by some bee-keepers as a most valuable forage. My bees have access to hundreds of these trees, and I have yet to see the first bee on the bloom. Now this is very strange when put by the side of what others say of it. I can only account for it by diversity of soil or atmospheric condition.

Buckwheat, north of the latitude of North Carolina, may be a good forage plant; but south, it is perfectly unreliable. It will only secrete an abundance of nectar when the atmosphere is cool and moist. This is a condition we cannot well have in the South. If sown, with us, in early spring, it comes in competition with forage that yields honey much more liberally than it does, and the bees go for the richest pasture. If sown so it will bloom in July and August, the time when we have a gap between the spring and fall flow, our hot suns dissipate all nectar if any should be secreted: and if sown so it will bloom in the fall it will come in competition with flowers that are better forage. Buckwheat will bloom here six weeks after sowing.

Our most reliable and best honey-sources are the poplar or tulip tree (*Liriodendron*), holly, black-gum, persimmon, and some others of minor consideration. The poplar never fails unless killed by frost, as it was last year. The honey is rather dark, but of most excellent flavor. Our main honey crop is gathered from the above sources, from the first of April until the middle of June. Before this, bees work on a great variety of forage, including fruit-bloom, commencing on the alder about the middle of January, which only yields pollen. This year my bees brought the first pollen in from the alder about Feb. 22, a full month later than usual.

The forage in semi-tropical Florida is entirely different from what it is in this latitude. The past cold, freezing winter has been very disastrous to the honey-sources there; so much so that for the time being the "tropical" part of the adjective would better have been erased and "frigid" substituted.

There is a very beautiful tree, *Sterculia platanifolia* (sometimes called "varnish tree," from the smoothness of its bark), that blooms the latter part of June, and continues in bloom some two or three weeks. The bees work on this from daylight until dark; and while I do not think it yields a great deal of honey it affords some for breeding, and fills a portion of the gap between the spring and fall harvest. The tree is of Japan origin, large leaved, grows very rapidly, very ornamental, and makes an excellent shade. I do not think it would grow north of the latitude of Tennessee; when quite young it needs some winter protection. I have none for sale. I presume young, two or three year old trees could be obtained of first-class Southern nurserymen.

During the past 30 years I have tried many experiments with cultivated bee-forage, and I am satisfied that it does not pay to cultivate plants exclusively for the amount of the nectar-secretion. There are many conditions influencing the secretion of honey that we do not understand, and as large and certain crops of honey are what the bee-keeper desires, he should give his best energies toward studying these influencing conditions.

Canadian Beedom.

Conducted by "BEE-MASTER."

How to Manage Bees in Canada.

It has been suggested that I write a series of articles on the above topic, but to do so in such a way as to cover the whole ground would be to write a treatise on bee-keeping, with a special adaptation to Canada. This is almost too big an undertaking for one department of a journal which has several departments, and to attempt it might seem like arrogating the office of instructor-general. For the management of bees in Canada is the same as in any other part of the world, except in so far as there are peculiarities of climate, forage and season to be accounted for. A few words on these three points will go far to answer the query at the head of this article. At the same time it must be borne in mind that after the most specific directions have been given about bee-management in a particular country, there is much for the bee-keeper to study in regard to his own special locality. What may be best for me in my field may not be equally good for somebody else whose apiary is 50 miles, less or more, distant from mine.

The first special features to be considered about Canadian beedom are the length and severity of the winter. These demand extra precaution, either in the way of outside cases with some kind of packing between them and the hive, or removal into a cellar or other repository on the approach of cold weather. Bees may be wintered safely in both ways, and each method has its advocates. In some parts of Canada the winters are steadily cold, and the mercury often descends a considerable distance below zero, and stays there for some time. In other sections the weather is more variable. There are days when the temperature is mild and even warm. Then, again, there is a cold dip, and perhaps, along with keen frost, a cutting wind. But there are both successful cellar-winterers and successful out-door-winterers in all these diversities of climatic condition. The cellar-winterers put their bees in winter quarters early in November, and endeavor to maintain an inside temperature of 40° to 45°. The cellar or other repository is regarded and treated as one big hive, and special care is taken to have a supply of pure air and ample ventilation.

For out-door wintering the requisites are a packing-box or case to set over the hive, large enough to admit of four to six inches of packing with dry sawdust, chaff or forest leaves. Ventilation is given at the bottom, and, as with in-door wintering, the provision must be ample. It is pretty clear that cold does not kill bees. The two evils to be guarded against are damp and insufficiency of stores. With plenty of air and abundance of food there is seldom any difficulty unless the colony is a weak one. With enough bees to keep one another warm, ample ventilation and plenty to eat, the winter problem is solved.

The next peculiarity of bee-management in Canada is connected with the forage. The honey harvest is in June and July. In order to succeed there must be a strong force of workers when the flow of nectar comes. There is a difference of opinion among bee-keepers as to the wisdom of spring feeding to build up an army of honey-gatherers. I do not favor it myself. The feeding should be done, if at all, not later than September. If the supply of food is abundant and the hive is kept good and warm, the bees will rear all the workers they can, without any puttering with spring feeding. They are wiser than human beings in regard to rearing a big family, which they will not do if they have not the means of supporting them. On the other hand, with an ample food supply, they will rear brood for all that they are worth. They seem to understand perfectly the importance of having all the young brood they can support, in order that the most may be made of the honey-harvest when it arrives.

A third feature in Canadian bee-management grows out of the fact that the season is short. In very few localities is there any fall honey harvest. Buckwheat is only grown in certain districts of the country. Where there is any quantity of it, the hives are well stocked with honey for winter, and sometimes a surplus is yielded. Beyond buckwheat, there is only a small assortment of nectar-yielding flowers that bloom in the fall of the year, enough to amuse the bees, and prolong the memories of the summer, but not sufficient to add appreciably to the winter supply of food. Consequently, particular care must be taken, not later than September, to see that colonies not amply supplied with a store of food for winter are fed with sugar syrup. The remaining preparations for winter should be made in good time—certainly before a very cold snap occurs—for bees, once thoroughly chilled, do not appear to do so well as when they glide into cold weather gradually and comfortably.

Items of News.

The following clippings are from the Canadian Bee Journal:

INCREASED GRANT.—Messrs. Holtermann and Pickett were appointed a committee to secure an increased grant of $200 for the Ontario Bee-Keepers' Association. No increase was placed in the estimates, but the Hon. John Dryden, Minister of Agriculture, placed $150 in the supplementary estimates, which passed the House. The Association would have liked the $200 asked for, but when so many demands are made we should be thankful for the $150. The Association will make good use of the money, and must exercise economy in every department.

A PURCHASE.—Some of the readers of the Canadian Bee Journal have been aware of the fact that C. A. Ouellett, Tilbury, Ont., has been publishing the Practical Bee-Keeper. At first it was a quarterly, but for some time it has been published monthly. We have not expected Mr. Ouellette to work in the interest of the Canadian Bee Journal, and Mr. Ouellette has not expected us to work in the interest of the Practical Bee-Keeper. Mr. Ouellette has also been a manufacturer of bee-keepers' supplies and we believe has had a very fair share of trade. Lately, Mr. Ouellette has seen an opening for a box factory and has made Goold, Shapley & Muir Co. (Ltd.) an offer, which has resulted in the purchase of the Practical Bee-Keeper and the machinery, etc., for the manufacture of bee-keepers' supplies.

There is not room for more than one bee-journal in Canada; a substantial financial backing is required for even one journal. When it comes to the supply business, Mr. Ouellette is quite willing to admit there are too many in the business now, and he would advise any one to go slow before engaging in that line of manufacture. Mr. Ouellete is not the only manufacturer of bee-keepers' supplies who has within the past year offered to sell out.

THE INDUSTRIAL PRIZE-LIST.—The Toronto Industrial Exhibition apiarian prize-list has been increased about $100, and other advantages have been secured. The prize-list has been changed to encourage less extensive exhibits, and we want a good many to make an extra effort to send extracted and comb honey, beeswax, etc., of the best quality.

Ten Weeks for Ten Cents.—This is a "trial trip" offer to those who are not now subscribers to the American Bee Journal. Undoubtedly there are thousands who would take this journal regularly if they only had a "good taste" of it, so as to know what a help it would be to them in their work with bees. In order that such bee-keepers may be able to get that "taste," the very low offer of "10 weeks for 10 cents" is made.

Now, dear reader, you cannot do a better service than to show this offer to your neighbor bee-keeping friends, and urge them to send on their 10 cents and get the next 10 numbers of the old American Bee Journal. In fact, *you* could afford to send the 10 cents for them, and then after the 10 weeks expire, get them as new subscribers for a year. They will be easy to secure then, for the 10 numbers will be a fair trial, and they will want the Bee Journal regularly if they are at all interested in bee-keeping.

Remember, it's *only 10 cents for 10 weeks*, to all not now subscribers to the Bee Journal.

A B C of Bee-Culture.—We have some of these books left, and in order to close them out quickly, we renew the low offers we made on them. This is the fine cyclopedia of bee-keeping by A. I. Root, containing 400 pages and nearly 200 engravings. The regular price is $1.25, but we will send the American Bee Journal one year and the "A B C" bound in cloth—both for only $1.80; or the parchment cover (very heavy paper) "A B C" and the American Bee Journal one year—both together only $1.50.

The American Bee Journal
ESTABLISHED IN 1861
OLDEST BEE-PAPER IN AMERICA

George W. York, - - Editor.

PUBLISHED WEEKLY BY
GEORGE W. YORK & COMPANY,
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Editorial Budget.

The Cool Weather just now (May 13) may be a good thing for the bees, if it doesn't get so cold as to chill the brood. The hot weather of a few days ago was bringing on the clover in this latitude so rapidly that the harvest would have been here without enough bees to take care of it. This weather will hold back the harvest, and it may give the bees more time to build up. Let us hope that all will be for the best.

The North American Convention this year has received a special grant of $100 from the Ontario Legislature, to defray the expenses at Toronto. I learn this from the Farmer's Advocate for May 1, an excellent Canadian farm paper. Look out for some "big doin's" at the next convention of the North American. It's just like those Canucks to try to out-do their United States cousins. But I suppose we'll have to stand it, and take what they give us this year.

New Bee-Writers are constantly coming to the front. Dr. Miller noticed it in a "straw" in Gleanings, where he says: "How many bright bee-keepers are coming to the surface as writers." Editor Root then followed with this remark: "Yes, I've noticed that there were more lately. I am glad of it, because it infuses new blood into our literature."

I think the past year or two there have been more new writers found in our bee-literature than in the previous five years. And, what's more, nearly all of them are superior writers, too. They possess the "know-how," both of practical experience and in the manner of telling it. May their tribe increase!

Secor Bros. & Co. is the way the firm name will read hereafter instead of Secor Bros. The new partner is Mr. Willard Secor, the son of Hon. Eugene Secor, so well known to the readers of the American Bee Journal. "Willard" has been cashier of the Faribault County Bank at Winnebago City, Minn., for the past five years, and brings to his new position the reputation of an active, prosperous business man of the highest integrity. This new arrangement should give Mr. Eugene Secor more time to devote to care of the bees, and also to write about them. He has kept his apiarian electric-light bid too much under a bushel the past few years. Let us hope from now on he will let his light shine out oftener.

Ten weeks for ten cents. See page 331.

Report of the North American.—Ex-President Abbott, after waiting over six months for the completion of the Report of the last meeting of the North American Bee-Keepers' Association, writes me as follows concerning the delay caused by ex-Secretary Benton:

MY DEAR MR. YORK:—I have patiently watched and waited for the completion of the printed Report of the doings of the St. Joseph meeting until I have about made up my mind that it will never be finished.

I have written to Mr. Benton and urged him to give to the public this report which belongs, legally and morally, to the Association, and not to him as a private individual. As he not only fails to furnish the completed report, but treats my letters with silent contempt, I think the time has come when the readers of the American Bee Journal should know why this delay.

Mr. Benton, as all understand, accepted the position of Secretary, knowing fully the nature of his duties; and more, he accepted the $25 which the Association voted him in payment for his services. Having done this, it seems to me he was morally and legally bound to complete the work in a reasonable length of time, or else give a plausible excuse for not doing so.

Mr. Benton occupies a public position, and is supposed to represent the apiarists of the United States in that position. If I do not very much mistake the temper of the intelligent bee-keepers of this country, they will not continue very long to recognize any one as their representative who so wilfully insults their intellegence by such actions. I know this is putting it strongly, but I am ready to stand behind all I say.

This is not a personal matter with me, but I confess I have been forced to make some rather humiliating explanations in regard to it. I promised copies of the printed Report to the Commercial Club of our city, and to some of our leading citizens, and the only reason I can possibly offer for not keeping my promise is that the Secretary has failed to furnish the copy to the printer.

Now, if Mr. Benton can offer any excuse for his course, I presume the columns of the American Bee Journal will be open to him, but as the case now appears to me, there is no excuse; as he has shown the utmost disregard for the feelings and interests of every one but himself.

EMERSON T. ABBOTT,
St. Joseph, Mo. *Ex-Pres. N. A. B.-K. Association.*

Mr. Benton still has in his possession about half of the Report. I have been ready all the time to proceed with it in these columns whenever I had *all* of the remainder of the copy in my hands.

A Big Offer.—Send two new subscribers to the American Bee Journal for one year, at $1.00 each, and get as *your* premium a free copy of Root's "A B C of Bee-Culture" bound in cloth. This offer will hold good only so long as the present stock of books holds out; so you'd better send your order within a couple of weeks. It's a big offer, and you ought not to miss it.

Terrible Bees of India.—Mr. J. S. Scott, of Springville, Utah, sends the following, which is taken from the Youth's Companion:

TERRIBLE BEES.—Not far from Jabalpur, in the highlands of Central India, the Nerbudda river boils along, deep and sullen, for two miles, between sheer walls of pure white marble a hundred feet in height. Here and there the white limestone is seamed by veins of dark green volcanic rock, a contrast which enhances the purity of the surrounding marble. As the visitor to these marble rocks is poled up the gorge in a flat-bottomed punt, he gives himself to the admiration of the marvellous scene of beauty.

But there is "a fly in the amber." Numerous colonies of bees, whose combs are attached to jutting ledges of the rocks, are easily disturbed, and then come down in angry swarms on the offender. An English engineer, Mr. Bobbington, was in a boat with a companion sounding the river for a projected crossing of a railroad. Several of the party were on the plateau above, shooting at the blue-rock pigeons that build in the cliffs.

The shooting irritated the bees, and they attacked the two men in the boat below, and forced them to seek protection by taking to the water. The companion eluded the stinging

insects by diving under water, remaining there for a long time, and, at last, hiding in a cleft of the rock.

But Boddington, although also a practiced swimmer, was never lost sight of by the exasperated bees, and in the end was drowned, and his body carried down the stream. It was recovered, and buried above the cliff under a marble slab cut from the rock under which he had met his death.

Captain Forsyth, of the Bengal Staff, who tells the sad story, says that he has several times been attacked by this species of bees, the *Bonhra* (*Apis dorsata*), while riding through forest tracts.

Once his baggage animals were attacked and scattered in every direction. One pony, that could not get rid of his load, was killed on the spot, and many of the men and ponies were so severely stung as to be laid up for several days. In the Mutiny days a large force of troops, horse and foot, were routed by a swarm of these terrible insects.

Efforts have been made to domesticate Apis dorsata, but I think those who have tried it have failed in every instance. The late Prof. Cheshire calls it "a useless savage," and says it is in the nature of things impracticable to hybridize our hive-bees with it. Mr. Baldensperger, who claims to have had some experience with it, says it cannot be confined to a hive, and cannot be kept from migrating at certain seasons any more than can wild fowl. From nearly all I have read about it, it seems almost impossible to ever expect it to be of any practical value, even if it could be successfully introduced into this country.

Dr. Adolphus de Planta.

In the British Bee Journal for March 14, 1895, the following sketch, and portrait (given on the first page of this issue), were published, which it is a great pleasure to reproduce here:

Dr. de Planta was born on May 13, 1820, at Tamins, in the Canton Grisons, Switzerland. He was educated in the college at Schnepferthal, and it was here that he acquired a taste for natural sciences. He then attended the classes at the Industrial School at Zurich, and upon deciding to devote himself specially to chemistry, he went to study in the universities of Berlin, Heidelberg, and Giessen. In 1845 he completed his studies, and after passing a brilliant examination he obtained a degree of Doctor of Philosophy. Being fond of nature and study, he traveled through France to England, after which he visited Norway, Spain, Portugal, as well as Egypt and Palestine.

For 15 years Dr. de Planta worked assiduously in his own laboratory at Reichenau, and occupied himself principally with researches on the mineral springs of the Canton of Grisons. During his stay in Germany, whither he had repaired for the education of his children, he was urged by Dr. Liebig and his friend, Prof. Erlenmeyer, of Munich, to investigate the unsettled points in connection with bees and their products. To this he devoted ten consecutive winters, and on his return to Switzerland he continued his researches.

There is hardly another man who has given so much time to scientific investigations for the benefit of bee-keepers as Dr. de Planta. Being of independent means, and with characteristic zeal and energy, this amiable and benevolent man was able to devote considerable time for the advancement of the pursuit in which he took so great an interest. Although we knew Dr. de Planta by his works previous to 1883, it was in that year that we had the pleasure of making his personal acquaintance, and have from that time carried on a constant correspondence. In 1883, whilst at Zurich, we had the opportunity of seeing some of the results of our friend's work, and it was to settle some of the points undecided up to that time that Dr. de Planta undertook the work. The results of seven years' labor were represented in two small cases in the exhibition. He had been experimenting for seven years with a view to determining the constituents of honey, as he found this different to the nectar in the flowers; and he also wanted to determine what part pollen played in the production of honey or wax. A bottle contained pollen which had been got from hazel blossoms, and 13 other bottles contained the different constituents of which this pollen was composed.

Dr. de Planta explained to us the difficulty he had had in getting a sufficient quantity of pollen for experiments, and it was such as would have certainly deterred any person with less perseverance from prosecuting the experiments. The same difficulty was experienced in getting sufficient nectar, which had to be collected by means of a pipette, and sealed up at once to prevent the action of bacteria. The constituents showed no coagulated albumen, but this was afterwards found in honey. He also found that whereas nectar contained cane-sugar, honey contained none, or simply a trace, which could not enter into calculation. To determine what caused the difference, he tried to find out what part the glands played in the transformation.

The way in which he carried out his experiments in this line is very interesting. He pounded a large number of heads of bees in a mortar, and dissolved out the saliva with glycerine, from which he was afterwards able to separate and analyze it. He found that by means of the saliva various substances in the nectar were converted into other substances which only appeared in the honey. This way he was able to prove that honey undergoes a change in passing through a bee, and that the saliva plays a very important part in producing this change. This determined, Dr. Planta tried to find out what prevented honey from fermenting or decomposing. This he found was formic acid, which is known to be a powerful preservative or antiseptic.

Bee-bread was next experimented upon, and was found to contain pollen, honey, and saliva. Experiments on wax showed that it contained cerotic acid, myricene, and saliva; so that it is evident that saliva plays a very important part in the products of the hive, which was quite unknown before that time. Another important work was to test the various substances on which bees could be fed with advantage for the purpose of producing wax. Bees were fed on honey alone, sugar and honey, sugar and yolk of egg, sugar alone, sugar-dextrine and rose-water, gelatine and sugar. The combs produced from these substances were of various colors, those from sugar being the whitest, next came the produce of gelatine and sugar, third honey and sugar; fourth honey alone; and those produced from other substances were quite brown.

He has further experimented on the methods of distinguishing between pure and adulterated honey. One of the grandest and most important works was that of determining the nature of the food of the larvæ and royal jelly, and thus confirming the view taken by Schonfeld that brood food was semi-digested, and produced in the chyle stomach. In opposition to this Schiemenz, who followed Leuckart, stated that "The food is not produced in the chyle stomach, but is a secretion from the glands," and this view, without anything to corroborate it, was adopted by Cheshire. The subject is too long to go into now, but it will suffice to say that Dr. de Planta's chemical experiments were quite sufficient to set this theory completely at rest, and to show not only that Schonfeld was correct, but that the anatomical structure of the bee was specially adapted for the particular way of feeding with chyle, and that the food given to the different larvæ differed in quantity and quality, according to their development. It would take too much space to go into the full details here.

Dr. de Planta occupied himself with other chemical studies, more particularly with respect to the esculent properties of various vegetables. The amount of work done in connection with bees may be judged from the following papers and memoirs published from time to time:

"Chemical Studies of Bees" (in conjunction with Dr. Erlenmeyer), 1878 to 1886; "Economy of the Hive;" "Pollen, Bee-Bread, and the Ferments Which they Contain;" "Methods of Distinguishing Between Pure and Adulterated Honey;" "Cappings of Brood-Cells;" "The Presence of Formic Acid in Honey;" "The Collection of Pollen by Bees;" "What Causes the Color of Wax:" "Detritus Collected in Hive;" "Chemical Composition of Hazel Pollen;" "Experiments in Artificial Feeding of Bees;" "Analysis of Barricades Constructed by Bees;" "Chemical Composition of Some of the Nectars;" "Composition of Brood Food;" "Fruit Sugar as Food for Bees;" "The Formation of Honey and the Elimination by the Bees of Water from Nectar," etc. These are some of the works for which bee-keepers are indebted to Dr. de Planta. He was busy at his favorite subject even up to the last, for only a few weeks ago we had a letter from him in which he told us that he was occupied on the pollen (bee-bread) in cells. Here is an extract from his letter:

"I am occupied with a big work on bee-bread (Bienenbrod). I have made partly myself, and have had done by an assistant, the analysis of combs, honey, cane-sugar, pollen, and bee-bread. As a result, the proof will be furnished that the opinion of Gerstung with regard to the degeneration of colonies of bees, on being fed on sugar, without pollen, is perfectly correct. What is self-evident, and is found by practical experience, will be confirmed and decided by figures derived from analysis."

For some time Dr. de Planta was President of the Swiss

Bee-Keepers' Association, and entered heartily into the work of that society. Last year he was elected honorary member of the British Bee-Keepers' Association, in consideration of the services he had rendered in the advancement of the science of apiculture. We have only briefly alluded to some of Dr. de Planta's work, but it is sufficient to show the great loss sustained by bee-keepers, and, in company with our Swiss brethren, we mourn his loss, and extend to his widow and children our heartfelt sympathy.

Bee-Keepers of the South are invited to patronize the "Southern Department" of the American Bee Journal. Send on your questions and bits of experience to Dr. Brown, who will answer and offer suggestions that will help you. You will be the loser if you don't take advaotage of Dr. Brown's large bee-experience and willingness to aid you in keeping your bees profitably.

Among the Bee-Papers

Conducted by "GLEANER."

THE SWARMING HABIT.

"I have noted that I have had less swarming in my apiary during the past eight years, through which time I have reared nearly all my queens over queen-excluders, than I formerly had: yet I would not think it best to put forth the idea that a continuation of rearing queens thus for a quarter of a century or longer would give a race of non-swarming bees."—Doolittle, in Gleanings.

OLD HIVES FOR SWARMS.

I confess to feeling not a little puzzled over what Dr. Hachenberg says on page 287, about using old hives. Surely he cannot mean that a hive that has been used must be thrown away as soon as it becomes unoccupied. He has lost about 50 swarms in trying all sorts of experiments to try to get swarms to accept old hives. In view of the fact that other bee-keepers have successfully used old hives all these years by the hundred, is it not just possible that his experiments always did something with the old hives that made them distasteful to the bees? Has he ever tried old hives without any salt or anything but the hives? I have used old hives many and many a time, and so have others, and this case of the Doctor's is something quite new.

A DISAGREEMENT—WHICH IS RIGHT?

There is a disagreement between Canadian Bee Journal and Canadian Beedom, and the question is whether "Journal" or "dom" is nearest the mark. On page 302 Bee-Master says, "In Germany, where there are more bees and bee-keepers to the square mile than in any othes part of the world." Canadian Bee Journal, page 507 of the May number, gives a table of the number of colonies per square mile of 11 countries, in which Germany has 9 colonies per square mile, Austria 13.37, Belgium 17.49, and Holland 18; the last being twice as many as Germany. In marked contrast with these, Ontario has about three-fourths of a colony to every square mile, and Canada .06, or one colony for every 16 square miles. Editor Holtermann offers this table as strong evidence against the view of Editor Hutchinson that as a country becomes settled and civilization advances, bee-keeping is likely to become less profitable. It does look a little like a knock-down argument.

BEE-MASTER AND DR. WATTS' ERRORS.

On page 302 Bee-Master points out "two great errors" in the well-known couplet of Dr. Watts—"How doth the little busy bee," etc. One is that Dr. Watts says the bees "gather honey;" and the other is that he says they gather "from every opening flower." But one shouldn't be too hard on poor Dr. Watts, when one sees the same errors repeated in the present day by those who are supposed to be up-to-date in bee-matters. Witness the writings of Bee-Master himself, who, on the very same page on which he makes the positive declaration that "the bee does not *gather honey*," says "honey-gathering" instead of "nectar-gathering," "honeyless" instead of "nectarless," and "honey is offered" instead of "nectar is offered." And then, after calling attention to the fact that instead of the bees gathering "from every opening flower," only *some* flowers yield nectar, in the very next sentence he falls himself into precisely the same kind of error by saying that bees gather from every flower which they visit, when it should be only *some*; for any one who has watched bees at work in New York state may have noticed them many a time fumbling over a flower from which they get no nectar, instead of being "invariably rewarded by a tiny drop."

EDITOR E. R. ROOT'S "PATENT" VIEWS.

Whatever may have been the opinions of my respected parent in the past, the more I look into the patent system in the United States the more I feel like admiring it. Although it has its defects, the system in our country, I believe the world acknowledges, is the most perfect in the world. And the fact that some of the greatest and most useful inventions have emanated from this land is evidence along this line.... On the other hand, I believe that our patent system should be so modified as to restrict some of the fearful abuses connected with some of these patent-monopolies. I am glad to see that the Supreme Court has recently made some much-needed and substantial limitations.—Gleanings.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Inoculation Against Stings. — "Mr. Herbert Smith writes us that in his experience particular parts of the body may become temporarily inoculated against insect stings."—Insect Life, published by the Department of Agriculture.

This is in line with my own experience, and I suppose many observant bee-keepers have noticed that after they have been working at the bees for some time and have been stung several times on the hand that a thrust at that point causes very little, if any, pain. Mr. Smith says that in picking specimens of wasps from his net, "The fore-finger of the left hand was stung so often that it lost all susceptibility even to severe stings, and it remained so for two or three years."

Prof. Riley, as quoted in another article in the same publication, says, in speaking of scorpions: "The effect of the sting upon a person diminishes in virulence with repitition, and may become innocuous." He further says, "They are dangerous in proportion to the state of irritation they may be in." Is it not possible that here may be found the reason why a sting from a bee is sometimes so very painful, and even fatal? I know we generally say it is the condition of the blood of the person who is stung, or the location of the wound, but is it not possible that the more excited the bee becomes the more virulent the secretion of the poison-sac? If this theory be correct, it will explain why it is that a number of stings frequently have no injurious effect, while at another time a single sting may prove fatal.

In the line of remedies for the sting of the scorpion, Mr. Smith says: "My wife was stung by a small one in the West Indies; the wound was on the end of the forefinger and was exceedingly painful. By the advice of a servant, she held the finger for an hour in hot sweet-oil mixed with an equal measure of laudanum. There was no swelling, and three hours after all pain had left her. This remedy is a popular one in the West Indies and the result seems to show that it is good."

It may prove equally valuable as a treatment for a bee-sting, and is worthy of a trial in severe cases.

Here is another explanation as to the cause of some persons being peculiarly affected by the sting of a poisonous insect. At first it would seem to contradict the first theory, but the truth of the matter would seem to be that a person in good health is better prepared to resist the ravages of the poison of any kind of an insect. This being true, dissipated fellows would better keep away from bees. Here is what Dr. Aaron has to say on the subject, as quoted from the article mentioned above:

"I am convinced that no healthy adult need have serious alarm from the bite or sting of one of these creatures, although, as I have more than once found out to my cost, their poisons are the cause of much and excruciating pain. Leprosy, yaws, the malignant forms of syphilis, are all very common among negroes, mestizos and half-breeds in the American tropics, and it is among such subjects that the poisonous insects and minor poisonous reptiles find their victims of serious poisoning and death. But a man in good health, with pure blood and of good habits, will, in every case (in my opinion), throw off their effects in from from one to five days."

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T. F. BINGHAM, Abronia, Mich.

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20A13 *Mention the American Bee Journal.*

General Items.

Will be a Golden Year.

Bees are booming here. We have had 30 inches of rain—17 is the average. It is going to be a golden year in Southern California. A. J. COOK.

Claremont, Calif., May 8.

Nuclei from the South.

Where the main honey-flow does not begin until about July 1, as it does here, it will pay to import one-frame nuclei from the South. The willow, box-elder and dandelions are just beginniug to blossom here now, and there is something for the bees to work on until the white clover comes, which is about June 20, and lucerne about July 1; from then we have a steady honey-flow until frost—about Sept. 15. In 1893 I got 10 one-frame nuclei in the spring, that averaged 38 sections each that season.

I have lost, the past winter, 23 colonies out of 73 that I had last fall, but what are left are in extra good condition.

Heber, Utah, May 1. J. A. SMITH.

Extracting with Heat—Hive-Covers.

Here is something new from an Ohio bee-keeper: He extracts all his honey by melting it, comb and all, in the oven of the kitchen stove. He then allows it to cool, which, of course, brings the wax to the top in the shape of a crust; and then by simply cutting a hole in the crust he can lay as fine a lot of extracted (or "evaporated") honey before his guests as you ever met with! Leastwise that's what he says. The wax is, of course, salable; and he cuts out only the part of comb that is filled with honey; leaving it for the bees to fill out again at their pleasure.

This is certainly a new idea—melting in an oven—and who dare gainsay it isn't a worthy new thing! It is less trouble and bother than extracting by machinery; and if, as a noted bee-doctor says, it can be made a reliable method, it is a good thing.

We are all pretty well aware, I presume, that honey will not staud too much cooking; in fact, beat is very liable to spoil both flavor and "keeping qualities." Honey is extremely delicate in this respect, and it would seem as though one must keep a pretty close eye upon the temperature of the oven in order to make much of a success of it. What do the American Bee Journal readers think about it, "anyhow?"

Query—What improvement can you suggest that will make our hive-covers waterproof, lasting, and non-crackable?

Denver, Colo. WM. M. BARNUM.

Handling Bees, Etc.

The reason why I prefer to handle my bees myself, is that I think I can do it better to suit me than any one else can, especially those that are not used to the business. I have handled thousands of colonies, having been in the business to some extent almost all my lifetime so far. (I am about 68 years old.) Besides, I sort my hives, if I may so express it, as I put them into the cellar. The medium heavy hives are put by themselves, also the light, and the very heavy ones by themselves. Then I know just where to find the light colonies in case I have to feed them while yet in the cellar; and in that case I can draw from the heavy colonies, and supply the weaker ones; and for other purposes—perhaps some honey to sell, and for various purposes. I feed no liquid sweet to bees in the cellar.

I commenced putting out my bees April 5, it being the first day suitable for bees to fly since some time last December, here in this section (although bees that were out, would come out the hives before, and would die quite a good deal, too). On the 5th, from about 2 p.m. I carried out 58 colonies. All the hives had bees in them, and were

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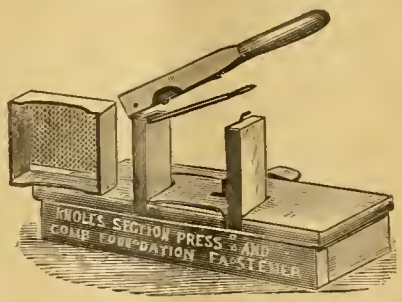

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mostly strong in numbers. On the morning of April 7 I carried out 50 colonies, it being all I put into the cellar except one, which was queenless last fall. I suppose my cellar was too damp and cold, as the hives and combs were somewhat moldy, and a few colonies were slightly affected with dysentery. All weak colonies, and those that are not right otherwise, if they are worth saving, I unite with other colonies.

H. F. NEWTON.

Whitney's Crossing, N. Y., April 23.

Bees and Strawberries Again.

I have just read the last article in the Bee Journal on strawberries and bees. I have about ¼ of an acre in those berries, and 22 colonies of bees. As there has not been a day since the strawberries commenced to bloom that the bees did not work most or all the day, I feel sure I should know the *facts*, in this locality; and more especially so this year, as I planted a new bed of the choicest varieties this spring, and have cared for them with the greatest of care; and yet (yes, I will say it) I have not seen one honey-bee on a single strawberry. I have seen a variety of fleas, and other insects, but no bees.

Does that prove they don't work on strawberries? To my mind, not at all; but it does prove that they can find other honey and pollen producing plants that are more to their liking than strawberries.

For the last 10 days we have had apricot, pear, crab, plum, cherry, apple, and all the forest trees in full bloom, and that is the reason they could not fly low enough to see the strawberries.

Our kind Heavenly Father has so provided things that the work of fertilization is not left to one class of insects, so when bees fail it is done all the same.

Cooksville, Ill., May 6. E. B. ELLIS.

Wintered Finely, Etc.

Bees wintered finely in the cellar, and they came out strong. I put my bees in Nov. 12, and put them on the summer stands Feb. 25. They had a good flight, and a few days later they worked on the soft maple, which helped wonderfully in brood-rearing. This is promising to be a fine year for bees so far. Now they are working on gooseberry blossom, which is a good honey-producer. Next is apple-bloom, which makes them hum the more. My bees are partly working in the sections, some colonies having 24 sections two-thirds full from apple blossoms.

I say bees are a benefit to fruit and berry blossoms of all kinds. I would not be without bees to grow berries and fruit of any kind. I grow berries of all kinds, and also fruit in a small way, and keep bees for pleasure. GEORGE F. YOOS.

Central City, Ill., April 29.

Wintered Well in North Dakota.

On Nov. 19, 1894, we put into the cellar 20 colonies of bees, all in fine coddition, and on April 6 and 7 we took them all out alive, and all in good condition except one colony. That one is very weak in bees, but has a fine large queen and plenty of honey. We would have put them into the cellar earlier, but delayed in hopes that we would have a warm day so the bees would have a good flight, but it continned cloudy and rather cold. The morning of Nov. 18 the mercury stood at 5 degrees below zero, and the morning of the 19th (the day they were put into the cellar) at zero. They did not have a good flight after Oct. 15. They were out a little on Oct. 23 and 24, and on Nov. 5.

I think the fact of their wintering so well was owing to being so well supplied with honey and bees. They were in one part of the cellar nnder the dwelling-house, which is divided from the other part by a board partition. The only ventilatiou they had was from the inside cellar door and through the chimney, which is built from the bottom of the cellar up, with a hole for a stove-pipe in the cellar. I had a stove in the cellar, and for nearly two weeks before puttiug the bees in a fire was kindled in the stove every day to dry and ventilate the cellar, and a little fire occasionally through the coldest part of the winter. The temperature of the cellar was generally only a little above the freezing point.

Our bees aro now, and for several days have been, carrying in pollen from the willows at a good rate. Whether bees get honey from the willows here or not I cannot tell, but I know they can get any amount of pollen. I know nothing about botany, and do not know what to call these willows. They grow mostly about streams, but will probably grow in any wet ground. They reach a height of 15 to 20 feet, and sometimes four to five inches through at the butt. The wood, except the sap wood, is about the color of wild cherry or Washington cedar, and is very lasty, and makes excellent firewood. Can some one tell us what it is called? and whether or not it produces nectar?

Up to this date the spring has been unusually mild. H. P. WILLSON.

Bathgate, N. Dak., April 24.

A Report for 1894.

In the last number I read the same old tune—"clover is good." What clover? Clover is poorer than for six years past—it is frozen out, with the exception of sweet clover on the roadside. I would like to find how far from here white clover is raised for seed. It was good to poor last year—from 8 bushels to 45 ponnds of seed per acre. While last year there were 200 acres within reach of my bees, this year only 6 acres. See the difference? The price was $9.50 to $8 per bushel. I had, in six weeks' time, two barrels of white clover honey—little enough for 50 colonies. So you can see if the atmosphere is not just right, it will not do anything. From 11 days' basswood I had nearly four times as much. I do not produce comb honey.

I learned to cure foul brood since I wrote last, and the three colonies cured are doing finely, having 4 and 5 combs of brood. One is on the same combs, in the same hive, and same frames as a year ago.

JOHN H. GUENTHER.

Theresa, Wis., May 1.

The Ozark Mountain Region.

We are in the Ozark Mountains, about 600 or 700 feet above St. Louis, Mo., and 115 miles south. I have only been here two years, and I think this is one of the best honey-producing countries I have ever seen. First, we have the witch hazel, that begins to bloom about Jan. 15, and blooms until March; then the soft maple, hard maple, and numerous other trees including the linden.

I brought four colonies of Italian bees from Arkansas last year, and lost two of my queens, so I had but two colonies left, and I gave them the two queenless colonies, and that made them very strong when the honey season came. They gave me 325 pounds of comb honey, and I increased to four colonies. I have had but one swarm in five years, that is, a natural swarm. I find artificial swarming the most profitable.

I use the Langstroth 10-frame hive, and find it to be small enough here, while the 8-frame was large enough in Arkansas.

I sow sweet clover for my bees, also Alsike clover and buckwheat about July 12 or 15; the buckwheat sown at that time blooms until frost. J. R. GIBSON.

Redford, Mo., May 3.

Something About New Mexico.

I have received the following letter from R. S. Becktell, of Bellaire, Mich., dated March 4, 1895:

I am in the north part of Michigan, near Traverse City. I have 90 colonies of bees. What is the lowest price of bees there in good hives? or do you know of any for sale cheap in box-hives near you, or south, near Pecos, Tex.? How cold is it there in win-

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ter? How much snow and rain in winter and summer? Does the weather get too hot in summer? Is it above 90 degrees much of the time? What honey-plants have you besides alfalfa? Is alfalfa very plentiful? Does fruit pay well? Is there much danger of frost killing it in the spring? What is the price of land, etc.?

R. S. BECKTELL.

The advantages here, I suppose, are a healthy and good climate, if one would call it such. We have had no rain since last August that would wet a man with his coat on. We had two snows about 4 inches each. Our rainy season is in July and August of every year. Bees do well here—a sure honey-flow every year, and for about six months straight along. Mesquite is just beginning to bloom, and lasts about two months. Alfalfa will bloom first in May, about the 15th to the 20th. It will be cut every 40 days, if it is handled rightly. They cut it four times, and when in full bloom. I have a world of catclaw for my bees. I have moved from Eddy to Florence, five miles srom a railroad station. This is all of the first-class honey-plants that are worth speaking about. This is a new country, and there is not much fruit here yet. There is one orchard within 3 miles of me, 6 years old—about 10 acres, 5 in grapes. The oldest part of the valley is at Roswell. Land is selling from $30 to $50 per acre, raw, that is, under the ditches, with a water right.

Lowest price for bees is $5 per colony, with no super on the hive, which has 8 frames. There are no bees in box-hives that I know of. The elevation here is 3,200 feet above sea level. The warmest days it is 112 degrees in the shade. The air is dry, the wind blows, and it doesn't seem to be warm. The coldest is down to 4 degrees below zero—but not over six nights all last winter, the coldest winter we have had for sometime. These are some of the advantages.

I now will try and tell some of the disadvantages. This is a prairie country—not a natural tree in 50 miles of here; so dry and sandy that a man cannot eat, from Feb. 15 to May 15, without eating sand in everything he eats. It is warm here, not hot or not cold. Sometimes it blows all day so you can't see 500 feet for a day at a time. Your hives will blow so full of sand that you will have to pour the sand out the next day so the bees can get out. On the 5th of this month we had one of those sand-storms, and I could not see my hives all day long. The next morning there was ice all over the ditches, and the fruit was in full bloom, and did not kill it, on account of no moisture in the air.

On page 240, J. W. S., of Dayton, Ky., wants to know if we have any sudden changes. Not cold ones, and no hot waves.

E. SCOGGIN.

Florence, New Mex., April 2.

Wintering Bees in the Cellar.

Last November I placed six colonies in the cellar, in Langstroth hives. I had a room built very snug and tight, using matched boards, and flooring over the bottom. Size of room, 12x14. There is a steam-boiler in the cellar used for heating the house, within four feet of the room, so that the thermometer did not vary from 58 degrees all winter, but I had an opening six inches square through the cellar window, which allowed a cold air draft all the time, giving plenty of ventilation.

I first placed a super on a bottom-board on the floor of the room, then placed a hive on that, allowing the whole space in the super for ventilation, the opening of course being the same as if the hive was out-of-doors. I then took off the cover, and put on a piece of old cotton cloth, then put on another super to hold the cloth in place—any other arrangement would do as well. In this way I left them no cover on, just the cloth above the bees, and the room dark.

April 20 I took them out, and placed them on the summer stands. They came out in splendid condition. I could not see that they moved all winter. They did not come out at all, and there was not a cup full of dead bees left in all the bottoms after the hives were removed.

Now in all the accounts I have read, it was stated that from 40 to 45 degrees was the proper temperature, but nothing could be better than the way my bees came out, and apparently they consumed very little of their stores, as the hives were very heavy; indeed, I could not see but they were as heavy as when put into the cellar.

O. E. DOUGLASS.

Lewiston, Maine, April 22.

Bee-Keeping in Central Missouri.

Bees are a great deal scarcer here than they were a few years ago, but those left are being managed in a way that better results are being realized. The box-hives and log-gums of long ago have almost disappeared with the "king bee" and other superstitious notions. In their stead we have modern hives, smokers, honey-extractors, Italian queens, bee books and papers.

The prospect for a honey crop, at this writing, is very good. Bees have built up very fast since about March 25, the best colonies overflowing with young bees. The weather has been dry and warm. Bees began work on apricot bloom about April 1; also on willow, elm and maple, in the order named, and now they are just roaring on plum, peach, pear, cherry, apple, gooseberry and currants. As I write, I can see the bees are busy, going to and coming from the hundreds of trees that now are clothed in robes of spotless white.

I had 16 colonies last year, which gave me a surplus of from 24 to 62 one-pound sections per colony, and from present indications they will do better this year.

The American Bee Journal comes to me regularly, and is one of my most valued friends. I read it carefully, editorials, correspondence, advertisements and all.

JOHN W. BEATTY.

Excelsior Springs, Mo., April 20.

Heavy Loss in the Cellar.

I put 65 colonies into my cellar, last fall, in good condition. About two weeks after I put them in, they commenced getting uneasy, and all but two colonies left their hives, and fell on the floor. I have two colonies left. MARK D. JUDKINS.

Osakis, Minn., May 10.

A Correction—Heavy Fruit-Bloom.

I wish to correct an error in my article on hive-construction, on page 296. The length of end-bar as there given was 11¼ inches. It should read 11 inches. Before I had read Mr. Chas. Dadant's article describing the Dadant-Blatt hive, and recommending a modification of it so as to use lumber 12 inches in width for the brood-chamber, I had made several brood-chambers of that depth, and had decided to make mine all of that depth hereafter, for the reason that he mentions, viz.: the ease of getting lumber of the right width. W. C. Frazier objects to these deeper frames on account of the greater liability of the combs to melt and break down in hot weather. I have not learned that the users of the Quinby frames, which are deeper still, have any trouble on that account.

Fruit-bloom was very abundant here the first days of May, and the weather warm and pleasant, with an abundance of moisture. My bees came through the winter in perfect condition, and colonies are all strong. I put supers on some of the strongest to discourage swarming, but in spite of the precaution I had a swarm issue the morning of the 6th. The weather has turned cold, and I reckon that I shall have to feed that swarm. EDWIN BEVINS.

Leon, Iowa, May 11.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 p.; illustrated. 25c.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Apr. 18.—The supply of comb hooey is very light and looks as though all would be sold, unless it be some California that is being spread upon the street. Best white comb brings 14c.; dark, 8@10c. Extracted, 5½@7c., according to quality, body, flavor and package.

Beeswax, 28@30c. R. A. B. & Co.

KANSAS CITY, Mo., May 8.—The demand for comb honey is light. We quote: No. 1 white 1-lbs., 15@14c.; No. 2, 12@13c.; No. 1 amber, 11@12c.; No. 2, 10c. Extracted, 5½@7c.

Beeswax, 25c. C. C. C. & Co.

CINCINNATI, O., May 14.—Demand is quiet for comb honey at 12@16c. for best white, and quiet for extracted at 4@7c.

Beeswax is in good demand at 25@31c. for good to choice yellow. C. F. M. & S.

CHICAGO, ILL., Mar. 18.—Demand is good for all grades of honey excepting dark comb. We quote: Fancy comb, 15c.; No. 1, 14c. Extracted, 5@6½c. J. A. L.

PHILADELPHIA, PA., May 18.—Comb honey is in poor demand. Large stores are now waiting for the new crop. Extracted is in fair demand. Beeswax has declined some, but good sales keep market from being overstocked. We quote: Comb honey, 9c. Extracted, 4½@6c. Beeswax, 29@30c. W. A. S.

NEW YORK, N. Y., May 6.—The market for comb honey is over. We cleaned out all of our stock of white but have some buckwheat yet on hand. Market on extracted is quiet, with sufficient supply to meet the demand. We quote: White comb, 11@12c.; dark, 8@9c. Extracted, white, 5½@6c.; Southern, 50@55c. per gallon. Beeswax firm and in good demand at 32@33c. H. B. & S.

Convention Notices.

ONTARIO.—The midsummer meeting of the Russell County Bee-Keepers' Association will be held on May 29, 1895, at the aplary of A. Edwards, Rockland, Ont. All interested in the production of honey are cordially invited to attend. W. J. BROWN, Sec.

Chard, Ont.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association, to be held in the city of Ft. Scott, on Thursday, June 6, 1895. Everybody is invited and all bee-keepers are urged to come.

Bronson, Kans. J. C. BALCH, Sec.

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CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.

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C. C. CLEMONS & Co., 423 Walnut St.

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BATTERSON & Co., 167 & 169 Scott St.

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WM. A. SELSER, 10 Vine St.

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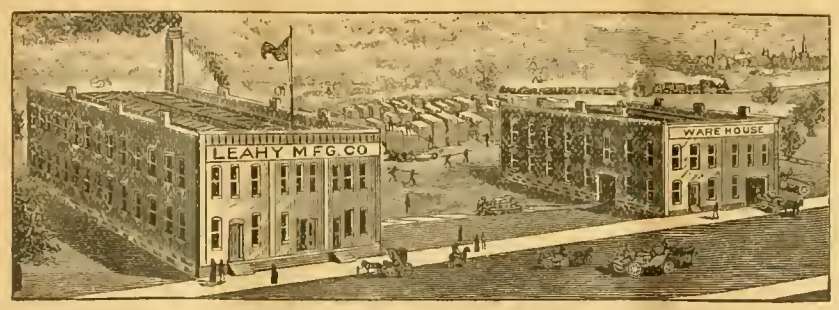
C. F. MUTH & SON, cor. Freeman & Central ave.



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To get your **QUEENS and BEES.** Untested Queens—Carniolans, 3-Bands and 5-Bands—$1.00 each; 6 for $5.00; or $9.00 per dozen. Tested — 3-Bands, $1.50; 5-Bands, $2.50 each; Carniolans, $2.00 each. FINE Breeders, either race, $5.00 each. Bees by the Pound, $1.00; 10 or more, 90c. each. Nuclei, $1.00 a Frame; 10 frames, 90c.—made to suit any hive. You can have any of the Queens, as above, at their price extra to go with Nuclei.

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Doctor's Hints

By DR. PEIRO, Chicago, Ill.
100 State Street.

Don't be "Round-Shouldered."

So many people are "round-shouldered." This is a deformity resulting from careless habits. By contracting the lungs it often leads to serious results. Boys and girls should be early taught to avoid this danger. The following is the most effective and easy way: The youngster should be taught to walk straight, and always to hold the little fingers to the side-seams of his trowers, the palm of the hand outward. In this manner the chest is thrown forward and the shoulders back. This is a radical preventive and cure if persisted in.

Sun-Bathing the Baby.

Teething babies are invariably benefited by prolonged sun-baths given every day. The little one should be held, naked, at the sunniest window in the house. Don't be afraid to tan or sunburn it. Much good if it does. It will express its pleasure by sundry crows, and wiggling of toes, and sleeping soundly when in his crib.

Heartlessness.

I quite agree with you, dear Lucy—only cowards enjoy the suffering of any of God's creatures. The boy who is mean enough to throw the stone that broke your doggie's leg would not hesitate to kill birds or stick pins into some smaller, helpless boy. Shame on such heartlessness!

Eat and Don't Worry.

"Appendicitis?" Refers to a difficulty of a small portion of the bowel—as likely to become inflamed and dangerous as that lightning will hit you. Keep right on eating everything as usual, and don't worry.

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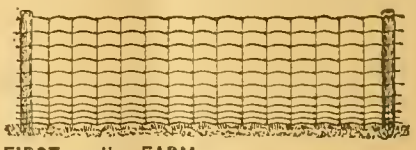
Apples are one of Nature's best remedies. Their peculiar (malic) acid, and the large supply of phosphorous they contain exactly suit them to human requirements. If baked they should be pealed and cored. The skin dried in baking is indigestible.



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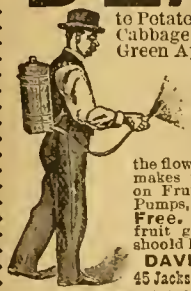
DEATH



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Golden Italian Queens $1.00 each. Free Price-List.

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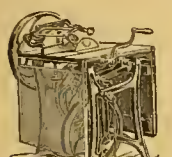

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—COMBINATION—

SWARM-CATCHER & DRONE-TRAP.

Full Description, nicely illustrated, sent free. Also our PRICE-LIST of **Beautiful Yellow-Banded Bees and Queens.** If Queens do not give satisfaction, no charge will be made. Our Queen-Rearing experience covers 35 yrs. Our strains of Golden-Yellow Bees unsurpassed. **HENRY ALLEY,**
19Atf WENHAM, MASS.

Mention the American Bee Journal.

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Double vs. Single Brood-Chamber, and Shape vs. Size.

Query 972.—1. Will just as much brood be produced in a given time in a brood-chamber consisting of two apartments, one over the other, as in a single brood-chamber of the same depth?

2. What influence has the shape of the brood-chamber, as distinguished from its size, on the amount of brood produced in spring?—Hive-Buyer.

J. M. Hambaugh—1. I think not. 2. I don't know.

Prof. A. J. Cook—1. I think so. 2. Not much, if any.

Mrs. L. Harrison—1. I don't know. 2. I never experimented on that line.

Chas. Dadant & Son—1. No. 2. The nearer square it is the more convenient it is for the queen.

Eugene Secor—1. I think so. I am using both, and observe no difference. 2. Practically, very little, I think.

W. G. Larrabee—1. I have never used a brood-chamber with two apartments. 2. I don't believe I can answer that.

R. Taylor—1. I do not know. I have thought so, but I am not certain. 2. I believe a square hive has the advantage.

P. H. Elwood—1. No. 2. More brood will be reared in a brood-chamber that allows the cluster to assume its natural shape.

Dr. J. P. H. Brown—1. I think the advantage would be on the side of a single brood-chamber. 2. It has very little, if any.

C. H. Dibbern—1. I do not see what could make any difference. 2. I do not think that the shape of the hive has much to do with it.

H. D. Cutting—1. I would prefer a single brood-chamber. 2. The locality and method adopted has more to do with it than the size of hive.

Rev. Emerson T. Abbott—1. I do not know. I want only *one* apartment to my brood-chambers. 2. None whatever. Plenty of bees and honey are what make brood.

E. France—1. Yes. 2. An 8-frame size Langstroth brood-chamber, two stories, is good. The same amount of room spread out two inches deep would be a poor arrangement.

Jas. A. Stone—1. No. 2. In the spring it often occurs that all the warmth is needed to encourage the queen in laying, and if you divide the space, you divide the heat, which would mostly be in the top.

G. M. Doolittle—1. My experience says no. 2. Bees best economize heat for brood-rearing where they can cluster in the form of a sphere, and the hive that allows them to thus cluster in early spring will give the most brood.

Rev. M. Mahin—1. Something depends upon the connection between the two apartments. If they are closely connected I do not see that any less brood would be produced. 2. Very little, provided the chamber is not very shallow.

R. L. Taylor—1. Two apartments would not work well. If you mean a horizontally divisible brood-chamber I would say yes. 2. Very little, I think, within the limits of the difference in shape among the hives used to any extent.

J. E. Pond—1. I think the single brood-chamber would produce more brood than a split hive. 2. This is a mooted question, and one on which there are many opinions. My preference is for the regular Simplicity-Langstroth hive, for many reasons.

Dr. C. C. Miller—1. I don't know. I shouldn't expect much difference. 2. Size *will* have something to do with it. If so small that the bees are crowded, it makes little difference about shape. If abundance of room, then the shape that comes nearest a natural cluster.

Wm. M. Barnum—I have always found a single Langstroth brood-chamber amply sufficient for all purposes. The plan mentioned will be found unprofitable. A single brood-chamber is enough and to spare, if the outside combs are judiciously worked over into the center as occasion requires.

Allen Pringle—1. That would depend upon circumstances. In a good honey-flow and high temperature there might be just as much produced, while in the reverse conditions I think the less would be produced. 2. That shape which tends more to the conservation of the heat and the convenience of the queen and workers. Therefore, the compact or concentric shape is best.

G. W. Demaree—1. In the early spring the double brood-chamber is at its worst, for rapid gain in brood-rearing; but later, when the weather becomes uniformly warm, there is not much difference. Aside from this, there is too much *fuss* attached to the double brood-chamber to be practicable. 2. A beginner will soon discover that he wants a hive for other purposes as well as for rearing brood.

Globe Bee Veil

By Mail for One Dollar.

Five cross-bars are rivited in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through.

It is easily put together and folds compactly in a case, 1x6x7 inches, the whole weighing but 5 ounces. It can be worn over an ordinary hat; fits any head; does not obstruct the vision, and can be worn to bed without discomfort. It is a boon to any one whom flies bother, mosquitos bite, or bees sting.

☞ This Veil we club with the Bee Journal for one year—both for $1.75; or give free as a Premium for sending us 3 New Subscribers to the Bee Journal at $1.00 each.

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

Comb Foundation. I have several hundred pounds of choice wax which I will sell made up into Medium Brood and Thin Surplus Foundation at 40c. and 50c. per pound respectively until all is ordered. Order at once if wanted. **J. J. ANGUS.**
18A4 PLYMOUTH, WIS.

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JAMESTOWN, N. Y.

☞ **W. M. Gerrish,** of **East Nottingham, N. H.,** is our Eastern agent. New England customers may save freight by purchasing of him.

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From Texas. My Bees are bred **For Business,** as well as for **Beauty** and **Gentleness.**

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Untested, $1.00—Tested, $1.50.

J. D. GIVENS, LISBON, Box 3 TEX.

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I ARISE

TO SAY to the readers of the BEE JOURNAL that

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has concluded to sell —BEES and QUEENS— in their season, during 1895, at the following prices:

One Colony of Italians on 9 Gallup frames, in light shipping-box	$7 00
Five Colonies.....	30 00
Ten Colonies.....	50 00
1 untested queen.	1 00
6 " queens	5 50
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1 tested Queen...	$1 50
3 " Queens.	4 00
1 select tested queen	2 00
3 " " Queens	5 00
Select tested queen, previous season's rearing .	4 00
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About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.	

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☞ Circular free, giving full particulars regarding the Bees and each class of Queens.

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—SOUTHERN—

Home of the Honey-Bee

Where you can buy **Queens,** as good as the best—Warranted Purely Mated, and guaranteed free from Paralysis. From either an Imported or a Straight 5-B. or Golden Mother—75 cents each; 12 for $7.50. Tested, $1.00 each; 12 for $9.00. After June 1st, 50 cents each; 12 for $4.00; Tested, 75 cents each, 12, $7.50.

Good Breeders, $2.00 each; Straight 5-B. or "Faultless" Queens, $2.50 each. **Bees,** 75c. per lb. Circular Free. Address,

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10A26 CLARKSVILLE, TEX.

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Abbott's Space.

☞ "My hives came through in four days. I am well pleased with them ..... I have shown the hives to quite a number of the bee-men here in the county, and they all like them. I could have sold all of mine, if I had been disposed to do so.....I shall talk your hive up all that I can, and shall order some more."

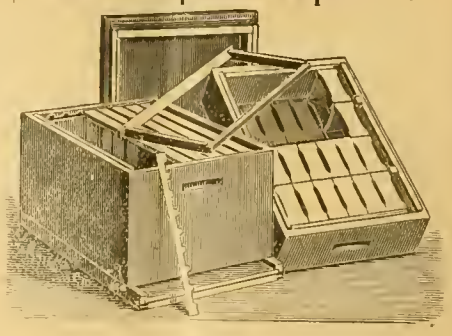
—WICKLIFFE, KY., May 6, 1895.

☞ Write for Circular.

Emerson T. Abbott,

ST. JOSEPH, MO.

Latest—Simplest—Cheapest—Best



The "St. Joe" Hive.

Hill Bee-Feeders.

We have a few of the Hill Bee-Feeders on hand, which we mail, prepaid, 2 for 40c. Or 12 by express for $1.50 —6 for 80c.

We will send 2 postpaid with the Bee Journal for a year, for $1.25, or give two Feeders as a Premium for sending us One New Subscriber to the Bee Journal, with $1.00.

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

Your Beeswax Exchanged

UNTIL FURTHER NOTICE, we will allow 30 cents per pound for Good Yellow Beeswax, delivered at our office—in **exchange** for Subscription to the BEE JOURNAL, for Books, or anything that we offer for sale in the BEE JOURNAL. In thus exchanging, we cannot afford to allow any Club Rate prices.

Always ship the Wax by Express, and prepay the charges; also put your name and address on the package to avoid mistakes.

GEORGE W. YORK & CO.,
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Seventeen Years Ago ✻✻✻✻✻ ✻✻✻✻✻ Dadant's Foundation

Was first offered for sale. The following parties keep it in stock and have kept it for years for sale. Why? Because they want to handle only the best goods, and they say they get the best goods when they buy Dadant's Foundation.

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THE OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS

35th Year. CHICAGO, ILL., MAY 30, 1895. No. 22.

The Hum of the Bees in Spring.

BY P. D. WALLACE.

There is nothing so dear
To the bee-keeper's ear
As the hum of the bees in the spring,
As they come forth at dawn,
From their hives in the lawn,
And their songs of industry sing.

They fly over vales,
Over hills and o'er dales,
And work through the sun shining hours;
They cull and collect,
From each blossom perfect,
The delicious nectar of flowers;

And they store it away
For a cold, rainy day,
In curious, hexagonal cells—
Not round, nor yet square—
You may think that is queer—
They are like little, beautiful wells.

With the cells they make combs,
In their sweet little homes,
That are pure and as white as the snow;
And seal them up tight,
To exclude air and light,
And finish them all as they go.

No artist can hope,
For ever to cope
With this cute little artist, the bee;
For her work is so good,
And the sweetest of food,
And a beautiful picture to see.

It is a surprise
To both palate and eyes,
And there's little doubt that she can
Make an artistic view,
That is perfect and true,
That delights the fine senses of man.

Now let this suffice—
It's exquisitely nice—
The extract of gay golden-rods,
And other sweet flowers,
Fresh from the showers—
It is fit for the fairies and gods.

McGrew, Wis.

The Blue and the Gray.

Scatter your flowers alike to-day,
Over the graves of the blue and gray.
Time has healed all the Nation's scars,
Peace has hushed all the noise of wars,
And North and South, and East and West,
There beats but one heart in the Nation's breast;
The grass is green, and the flowers bloom
Alike upon soldier and sailor's tomb;
So scatter your flowers alike to-day,
Over the graves of the blue and gray.

When Should the Nation Forget?

ALMEDA E. WIGHT. Copyright, 1895, by Robt. C. Marquis. ROBT. C. MARQUIS.

1. Oh, when should the na - tion for - get The val - or - ous deeds of her sons?
2. If mor - tal, when men-aced by death, Stands trem-bling be - fore the dread foe,
3. As long as a drop of life's wine In veins of the na - tion re - main,
Oh, when should she cease to re - gret The price thro' which vic - t'ry was won?
And friend - ly form, com - ing be-tween, Re - ceiv - eth death's ter - ri - ble blow;
Re-mem-brance should brighten the tombs, Where the forms of her mar - tyrs were lain.
The years are fast fly - ing a - way, As ev - er the years have done;
If ev - er that mor - tal for - gets, Or ceas - es to rev-'rence his name,
May she show by her trib - ute of flow'rs, Tho' years in - to a - ges should run,
Ah, when should the na - tion for - get The val - or - ous deeds of her sons?
"In - grat - i - tude base," we would say, "De - serv - ing of in - fi - nite shame."
The na - tion can nev - er for - get The val - or - ous deeds of her sons!
CHORUS.
Then cov - er them o - ver with flow'rs, Those no - ble de - fend - ers of ours;
Rit.
We'll bur - y them deep 'neath the bow'rs, Those broth-ers and sons of ours.

Contributed Articles.

On Important Apiarian Subjects.

Do Bees Work on Strawberry Blossoms?

BY HON. EUGENE SECOR.

In an essay read by me at the annual meeting of the Iowa State Horticultural Society last winter, I stated that "Bees seldom work on strawberry blossoms."

In the American Bee Journal of March 21, ex-President Abbott disputes my statement. He advanced some specious arguments to prove that I am mistaken, and says, "The strawberry yields both nectar and pollen;" and, again, "it has been my observation that bees do visit strawberries in abundance."

I replied to this in the American Bee Journal of April 11, and in closing called on bee-keepers and others who had made observations along this line to give us the facts. I was, and am, willing to submit this question to a competent jury of bee-keepers and horticulturists. I never had any desire to prove that bees do not pollenize strawberry blossoms.

But while waiting for the evidence to come in, Mr. Abbott, in the American Bee Journal of May 2, labors by specious and ex-parte statements to break the force of my arguments.

If the strawberry growers in this country will read his last reply to me on page 283, I think they will conclude that if he doesn't know any more concerning the subject in hand than he does about strawberries in general, he is not a safe adviser. He may out-talk the farmers in a Missouri Farmers' Institute, but let him come before the Horticultural Societies of Iowa and make the statement which he does by inference—that the so-called staminate varieties bear no fruit—and he would be laughed at for his ignorance. When I said "perfect flowering kinds," I meant precisely that. I would like to have Mr. Abbott name some of the varieties that produce "stamens only," and therefore "bear no fruit." Will he name the old and familiar Wilson, or Capt. Jack, or Jessie, or Beder Wood, or Parker Earl, or Gov. Hoard, or any of the other sorts sent out as fertilizers to the pistillate varieties? Certainly not, because they do all bear fruit. I would like to have him name *one* variety used as a fertilizer that has stamens only. It will be news to some of us to learn that the rows planted for fertilizing the main crop do not bear fruit, as he intimates.

But this is all outside of the question before us. I asked for the facts, not for more theories. We have had quite too many theories already. I would like to know that bees *do* work on strawberry blossoms, and thereby aid in the pollination. Since Mr. Abbott has so persistently refused to believe, I have taken a little pains to get the testimony of some of my friends whom I happened to know were both bee-keepers and strawberry growers, and men of trained habits of observation. They replied to my questions at once, and in a manner which I think will carry more weight than columns of specious pleadings.

The first letter is from William Kimble, of DeWitt, Iowa, who raises strawberries by the acre and honey by the ton, and reads thus:

"Your favor of May 6 is received, and in reply I will say that I have been growing strawberries for ten years. I have also had from 100 to 150 colonies of bees all the time, and have watched carefully for bees on the flowers. It is a fact bees seldom ever touch a strawberry blossom. I have three acres in full bloom now, and I haven't seen a single bee on them this year. I have seen a stray bee on strawberry blossoms only one year that I recollect, since I have been in the fruit business, and it is a fact that they never work on them. I wish they did. I have studied the pollen theory, and I assure you I appreciate the benefit bees are in carrying pollen from one blossom to another. It has to get there, or there is no fruit. WILLIAM KIMBLE."

The next letter is from W. S. Fultz, of Muscatine, Iowa, one of the most careful observers I am acquainted with. He writes as follows:

"Yours of yesterday is at hand, making inquiry as to how long a time I have been growing strawberries, and to what extent I have observed bees working on them when in bloom.

"I usually have three acres of strawberries, and aim to keep about 30 colonies of bees. At the present writing I have three acres of strawberries and 28 colonies of bees in first-class condition. My strawberries are now in bloom, and present a lovely sight, and give promise of a bountiful crop.

"As you are well aware, I have for the past ten years, or longer, been making a special study of insect-fertilization of fruit-bloom, and, in this connection, I have taken particular notice of the bees that worked on the strawberries while in bloom, and have never seen but very few bees working on strawberry blossoms, and those few had a very solitary appearance; and it always seemed from their actions that they were hunting for something that could not be found. This year I have taken unusual care in watching the strawberries while in bloom, and I am satisfied that there is not at any one time an average of one bee to 10,000 blossoms; and that my entire three acres would not furnish enough honey to keep a nucleus of one pint of bees alive for one week, if they had no other supplies than what is furnished by the strawberry bloom.

"At the present time the bees are working on the oaks. The black oaks in my door yard are in bloom, and the bees are fairly roaring on them. In my 22 years' experience in raising strawberries I have never known them to get up the smallest attempt at a roar on the strawberries when in bloom.
W. S. FULTZ."

The next is G. M. Doolittle, of Borodino, N. Y. He needs no introduction, and no certificate of character and qualifications from me. He says:

"You are quite right about bees not working to any amount on strawberry blossoms. It must be a time of extreme scarcity to work on either strawberry or blackberry blossoms. I have raised strawberries for the past 18 years, and only in two years out of that time have I seen bees on the blossoms—to say they were at work on them. Of course, now and then a bee will hover over the bed in all years, alight down, run over a blossom or two and go off; but this is no more than they do on white daisies, etc., which never yield honey. I was told 20 years ago that bees did work largely on strawberry bloom, but, like you, years of experience and watching say *no*. G. M. DOOLITTLE."

Dr. C. C. Miller, of Marengo, Ill., says in Gleanings, in answer to his own question, "Do bees work on strawberry blooms?" "I don't remember ever seeing them at it, and I've had strawberries by the acre."

Talk about nectar in strawberry blossoms! My olfactories are reasonably sensitive, but I never could detect much fragrance. Forest City, Iowa.

Queens—Cheap vs. Good Ones.

BY J. W. ROUSE.

We notice in the bee-papers from time to time, something in regard to the purity of queens, also as to their prolificness, etc. I wish to say that buyers of queens are to blame in a large measure for unsatisfactory queens—not every one, but many, want queens as cheap as possible, but some do want, and ask for, a reduction even on a low price. I do not wish to blame any one for wanting to be economical, and to save all possible expense, as in many instances bee-keeping is not paying, and those that are economizing and not paying unnecessarily high prices are to be commended; but economy can be carried too far, and what one would save in expenditure may be much more than lost in the use of the cheap article.

Now as to cheap queens: It is just as easy to rear queens from good stock as it is from poor. The difference in the price of a good queen for breeding, and a poor one, is of little consequence, when the number of queens that can be produced from them is considered, so that I think in most, if not all, cases, breeders of queens use good stock to rear young queens from; so I do not think the trouble or complaint comes from the use of poor stock as a starter.

A queen-breeder, to make it pay, has to sell large quantities of queens, if sold at a low price, for if there is a honey-flow his bees could gather nectar, and the queen-trade has to be enough to make up the loss of honey the bees would have stored, and pay the queen-breeder for his time spent in working to rear queens. To sell queens at a low price, the breeder can produce good, strong queens; also as they can be produced in any quantity desired; but to sell queens low, the breeder cannot be as careful in the selection of his young queens, and they must be sold quick—that is, the breeder cannot afford to keep the queens long enough to know by a trial that his queens are more than ordinarily prolific, if sold as untested, or if sold as tested he cannot keep them long enough to rear other young queens from them so as to know of their absolute (I speak advisedly) purity; for if there is any cross blood (so to speak) in the young queen, it is most sure to show in a young queen. If queens are tested long enough to know that they are very prolific, and produce well-

marked queens and good workers, they are usually sold as select tested, and generally for breeders.

It takes time, and time is money, to do all of this, so that if buyers of queens want these kinds of queens they must expect to pay a higher price for them.

As to the profit of a good queen over a poor one, there is no comparison, as a poor queen may be kept for one or two seasons and her bees produce no surplus at all, where a good queen would by her bees produce a surplus; and even if as much as 25 pounds of honey is obtained with a good queen over a poor one, this would more than make up the difference in the first cost of the two queens.

I do not wish to make an excuse at all for a queen-breeder that will sell poor queens when he knows them to be such, but as long as there is a demand for queens at a low price they will be furnished, but the buyer must take his chances of getting good queens from these, as he has to test them, and these low-priced queens may produce some of the very best, provided, of course, good stock is used to start from; and even if some prove to be poor, at the price, others may be obtained, and in the long run may not cost any more than good queens.

Mexico, Mo.

Honey-Dew—Wintering in Utah.

BY E. S. LOVESY.

Much has been written and many questions have been asked of late in regard to this so-called honey-dew. I fail to see any reason, or cause, why it ever was, or should be called by the name "honey-dew." The idea that our friends, the Stanleys, advance (page 130) that it falls as a dew from the heavens cannot be supported or sustained. In regard to the question that has been many times asked, as to what honey-dew honey is made of, I have waited long for an answer from some of our prominent bee-keepers. I presume the cause that produces it is pretty much the same in all localities; if so, it should be called "bug-juice." This is the name given to it here by some of our horticulturists. It is produced here by very small insects, generally known as the aphis family. The grade can be defined to some extent by the particular kind of aphis that secrete it. There are several species of green and light colored aphis that produce a compound which when mixed with a better grade of honey can be passed as honey. There are the brown, black and other aphis whose secretions can hardly be called honey. The very best grade of it is not first-class honey. I have not noticed the bees working on it more than once in several years, and as the bees always gather the best, it is proof that they find something better than the so-called honey-dew.

The insect sucks the sap from the leaf, and as it passes over the leaf a portion of this honey-dew is left sticking on the leaf. If we place them under a microscope we find that their bodies are largely composed of this honey-dew.

It has been asserted that ants herd these insects on the trees, and thus obtain a supply of food for themselves, but I do not vouch for this statement.

WINTERING BEES IN UTAH.

Winter has come and gone, and the bees here, as a rule, have pulled through in good condition. While we have had a moderately mild winter in this Rocky Mountain region, the mercury went down to zero about the beginning of the new year. The success that I have had the past winter convinces me more than ever that I do not want any more sealed covers. Our bees invariably die in winter from one of two causes—they either smother or starve. In zero weather they will starve to death with the hive nearly full of honey, unless the honey is located immediately above the cluster; hence they should be protected so as to absorb all moisture, and keep them warm and dry. Under these conditions, if they are strong, with plenty of honey near and over them, they will come through the winter all right.

Salt Lake City, Utah, April 23.

"Sap-Honey" Instead of Honey-Dew.

BY JOHN HANDEL.

Now, after Stanley & Son have broken the ice in defense of honey-dew honey (see page 130), its friends will creep out from under cover by the score, ready to sacrifice time, paper, etc., in defending that much-abused colored substitute. So I won't be surprised if this gets crowded out of the American Bee Journal. But our colored friend has been kicked so hard, and long, that we got into the habit of "going around to the back door" when we offered it to the public—and, therefore, feel reluctant about coming out. Some may wait for an invitation from the editor before they "talk back." Those having no "ax to grind," need some encouragement, in order to make them come out boldly and advocate principles and ideas which are antagonistic to those expressed by the paid writers.

The science of our pursuit is suffering because so few are allowed to do the thinking, or are encouraged to express their thoughts. Few care to criticise the fine-spun theories of the paid writers, and unless our bee-papers are not only willing, but offer some reward, to those who are able to "talk back," the truth will be smothered by the selfish interests of the few.

If those who have done so much towards prejudicing the people against the use of this double-refined sap-honey (what is the matter with that name?) had taken that time in investigating the so-called "stuff," they might have found a great deal of good, and really nothing so very nasty in it. I see no reason why people should be prejudiced against eating this natural product, unless it is detrimental to their health. The fact that it is a secretion, should not deter milk-using people from adding this honey to their diet; and if it is all in the name, of the first manipulators of this product, then let us change their name, and allow the people to eat it, if they like it.

I have sold hundreds of pounds of this sap-honey in my home market, and have never heard any complaint of what I sold. (But a few tell me what the other fellow sold them was "nasty.") I always sell it 3 or 4 cents less per pound than the best white honey, and find plenty of people who buy it, that don't buy white honey. They buy it because they like it, and probably like it because it is cheap. I tell them how to take care of it, for so many people have an idea that honey should be kept cool, and therefore put it down cellar or in the buttery, where it soon absorbs moisture, and if pollen or other foreign matter is present, fermentation sets in. This is the reason so much sap-honey is not fit to eat; and I think the only reason why it is not fit for winter food for the bees is because, whether on the summer stand or in the cellar, sufficient moisture forms and is absorbed even through the cappings to spoil and sour it.

Sap-honey, when first gathered, has a disagreeable smell, especially that from oak leaves, but if kept in a well-ventilated and dry room for a few months, this odor will pass off. The smell, probably, has caused more people to despise sap-honey than either its looks or taste.

Savanna, Ill.

Large vs. Small Hives—An Experience.

BY G. W. M'GUIRE.

I have read the discussions regarding large and small hives with no little interest. Having been a close student of bees and their habits for seven years, and having made the production of honey a success, I will endeavor to give a bit of my experience along this line.

I have used brood-chambers from 600 up to 2,100 square inches, and if the reader were here now (March 29) to witness the vim and bustle of those massive hives compared with the small ones, you would not hestitate a moment in saying the large one was worth three of the small.

One year a neighbor of mine ordered a queen from an Ohio breeder, and introduced her to a colony with 1,136 square inches of comb surface. After a trial of two seasons, this colony gathered no surplus. As they were fine Italians, I decided to buy them. Accordingly they were bought for $5. I saw at once they had been cramped for room. I gave them a brood-chamber of 2,172 square inches of comb surface, and fed them until they had a big surplus.

This colony had usually swarmed early, but now the queen remains quiet, filling this massive chamber with brood and honey. At the opening of basswood it swarmed. I hived the swarm in a 10-frame Simplicity. The flow lasted just 16 days, and in this time they had filled this hive and a surplus of 63 one-pound sections.

The next spring I bought colonies in four small hives, from a man who never made them pay. I was too busy to transfer them to larger quarters. Now these four did little but swarm, while the massive colony gave 110 pounds of surplus honey. I have another colony with 1,800 square inches, which always pulls through booming.

Who has said bees refuse to enter sections from these capacious brood-chambers? In my observation it is just the opposite. I have never been able to get bees into the sections from my small hives by 5 or 10 days as soon as the large ones.

When you hive a swarm in one of the large hives, don't

expect too much at the beginning. The brood and store chamber must first be filled, then it becomes a bank, from which you can draw surplus year after year, and your dividend will not be diminished.

Some one has objected to so much honey being in the brood-chamber. All the better. This surplus that must accumulate in the outside combs of these large brood-chambers is priceless capital; and is to the bee-keeper what life-boats are to the sailor. It will bring fruit a hundred-fold.

On June 2, 1893, by reference to my scale hive record, one of these large colonies gathered 22 pounds from poplar. I think I have one of the best localities in the world—a vast region of poplar and basswood, among the mountains of western North Carolina; a description of which I will give later.

Dark Ridge, N. C.

Golden Queens—Comb Foundation.

BY EDWIN BEVINS.

After protesting a good many times, and with considerable emphasis, that I never, never would do it, I have been, and gone, and done it. I have just ordered from the South one of those golden queens which it is said the St. Joseph convention sat down upon. The pressure didn't seem to press the life out of them quite, and it is probable that they will do business at the old stand for a season or two yet.

I have recently been reading a part of the discussion that has been going on about these yellow bees as compared with the 3-banded or leather-colored bees. The writers who have a preference for leather-colored queens seem to be in the majority, and also to have the best of the argument. It may be some satisfaction to them to know that they have the President of the United States on their side. Quigley and some others have been crying out that they burnt their fingers with the golden bees, but their burns didn't hurt me, and I am not going to be satisfied until I burn mine, or find out whether there is anything scorching about them or not.

I am half sorry that I did not send to Doolittle instead of sending South. Next spring, if I live until then, and am able to handle bees, I shall send to him for a queen or two, to enable him to buy a hat for the chap who does the talking for him in the American Bee Journal. He is such a handsome-visaged, well-proportioned fellow, that it seems to me to be a shame that Doolittle does not get him some good clothes! He has, too, such a persuasive, expectant look and attitude that I believe it will be impossible for me to resist his appeals for more than another year.

Somehow, Mr. Editor, I have been saying things that I did not start out to say at all. What I intended to say is, that I have lately received samples of foundation from different makers. Some of these samples have the natural odor of beeswax. Other samples, lighter in color, have this odor conspicuously absent. I would like to have your corps of experts tell me what makes the difference in odor and color, and also which kind each one would prefer for his or her individual use.

Leon, Iowa, April 10.

Frames or Hives—Which Shall We Handle?

BY WM. S. BARCLAY.

In these days of progress in bee-keeping, it has been frequently suggested that instead of handling frames singly, as has been the usual manner of manipulating our colonies, that all this inconvenience can be avoided, and much valuable time saved in the apiary, by simply handling the hives which contain the frames holding the bees of the colony to be operated upon.

Reading up the many plausible reasons given for this radical change in our labor, we find many things which at a casual glance would appear quite attractive. It is not necessary here to again go over the ground which has already been well traveled by those who have an interest in such hives as can be handled in such manner as will indeed save much labor, but we would suggest that a more prudent course would be to meet the question half way; by this we mean that we can use such hives as will permit us to handle the hive when necessary, and at the same time we can take out any frame we think it necessary to examine.

For many years past I have advocated the use of hives which contained no observing glass in any part of the hive. Almost any expert bee-keeper will tell you that he can almost always tell when anything is wrong within the hive, by a close inspection of the entrance as the bees pass in and out of the hive. He may not be able to explain this fact so plainly to you that you will understand it, but he has seen enough to arouse his suspicions, and he then inspects the colony, frame by frame, and thus finds out just what is the matter. Now, did his hive have a back or side glass, it might look so favorable within that he would not take the trouble to inspect the colony, comb by comb, and would thus fail to find out anything wrong until the trouble had gone so far that it was beyond remedy.

To many of our young bee-keepers, the assertion that any trouble within will be suspected by a careful look at the entrance, may be very mysterious, and yet if they will talk to old and expert bee-keepers, they will certainly justify me in the position I have taken.

Another matter in relation to handling hives instead of frames, if I understand it properly, we will have to give up our suspended frame. I mean the frame which hangs from the rebate, as in the use of the "Langstroth system." This I should be very loth to do, but would rather, in case I found it necessary to invert a frame for any purpose whatever. I can easily construct a suspended frame in such a manner that I can invert the frames, or combs of a full colony, in less than half an hour, and still have a lighter, but much stronger, frame than the one which has only a single triangular top-bar, and with but little if any additional cost; and this course will avoid the handling of a heavy colony of bees at a time when it is not convenient so to do.

But as this article has already grown too long, and as the suggestion of this frame opens a new question, which I may explain in the near future, I will draw it to a close.

Beaver, Pa.

Report of the Utah Convention.

The Utah Bee-Keepers' Association met in Salt Lake City, on April 4, 1895, with Pres. Lovesy in the chair. The Secretary's report was read and approved.

The committee to confer with the railway authorities reported, and their work was approved, and the committee continued until the next meeting.

The Address of the President.

Pres. Lovesy's address followed. He counseled a more thorough organization, to be strengthened and extended throughout the Territory. "United we stand, divided we fall;" hence it is essential as bee-keepers that we should unite and organize for self-preservation.

DISPOSING OF THE HONEY CROP.

Referring to markets, and disposing of the honey crop, he said bee-keepers should adopt some practical method for collecting and disposing of the product of the honey-bee. Something of this kind appears to be the only course left to prevent the utter demoralization of our home market. He also said that transportation unfair charges, and excessive or discriminating rates have been a cause of much complaint in our Territory. This matter should be agitated until fair or reasonable rates are secured.

EFFECT OF THE FOUL BROOD LAW.

He asked whether the foul brood law filled the conditions necessary for the protection of the bees. If not, it should be altered or amended so as to make it a benefit, or at least a protection for the bees and bee-keepers. The law in its present form seemed more of an annoyance than a benefit to bee-keepers. He thought the law should be amended, not to make the bee-industry profitable, but as a protection against contagious disease.

THE SPRAYING OF FRUIT-BLOSSOMS.

With reference to bees and fruit-tree spraying in the blossom, he said this was a subject that every bee-keeper should be interested in, as the very existence of the bees is threatened by spraying the bloom. Even the fruit-growers themselves should recognize the fact that they often suffer greater loss than the bee-keepers, as many fruits, plants, seeds, etc., cannot be grown profitably without the bees fertilizing them. Many seeds, even if grown without fertilization, if sown, they will not grow and produce their kind. It should be apparent to all that a fraternal feeling should exist between the bee-keepers and fruit-growers, that the two industries should harmonize for the general good.

The following letter from Prof. A. J. Cook, the originator of the spraying system for fruit-trees, who was employed by the government to write up the subject in the United States

government reports, and is the highest authority on spraying in this country, was read:

CLAREMONT, Calif., April 2, 1895.

MR. E. S. LOVESY—*Dear Sir:*—Say to your people that the codling-moth do not lay eggs until the blossoms fall. Say also that the poison is slowly removed, so that it is never wise to apply it until necessary. Thus, to spray before the blossoms fall is unwise, to say nothing about its effects on the bees. No one should spray until blossoms fall. Policy and justice alike affirm this. Yours truly, A. J. COOK.

SIZE AND STYLE OF HIVES, ETC.

The subject of size and style of hives for this section of the country was considered. Various opinions were given, but nothing satisfactory was agreed upon. Various hives are used in Utah, but no particular kind is adopted. By a large number of bee-keepers in Utah county, the 8-frame dovetail and American hives are used. Mr. Lovesy prefers the 8 or 10 frame Langstroth hive. He gave an interesting sketch of his method of handling bees in them. Mr. Smith, of Heber, uses the 8-frame dovetail hive, and while he lives at an altitude of 7,000 feet, he reports that his bees wintered well.

Mr. Flack, of Idaho, gave the convention some interesting remarks regarding bee-keeping in that State. He uses the Langstroth hive. He gave a sketch of his bee-keeping experience in Illinois, but thought that Utah and Idaho were preferable. He had never regretted adopting his present location for a home.

The election of officers for the ensuing year resulted as follows:

E. S. Lovesy, President; G. N. Dow, Vice-President-at-large; and George E. Dudley, Secretary and Treasurer.

The following County Vice-Presidents were elected:

Weber county, R. T. Rhees, of View; Cache county, J. J. Bell, of Logan; Davis county, J. B. Clark, of Farmington; Tooele county, George Craner, of Tooele; Salt Lake county, J. B. Fagg, of East Mill Creek, and William Phillips, of Salt Lake City; Utah county, O. B. Huntington, of Springville, and George Hone, of Benjamin; Wasatch county, J. A. Smith, of Heber City; Kane county, James L. Bunting, of Kanab; Washington county, Mrs. Woodbury, of St. George; Juab county, H. C. L. Jorgensen, of Levan.

Messrs. H. Taufer, J. B. Clark, G. N. Dow, Wm. Phillips, and George E. Dudley were appointed a committee to draft a new foul brood law, to be presented for the approval of the next bee-keepers' convention.

The convention adjourned to meet at the call of the President. GEO. E. DUDLEY, *Sec.*

Salt Lake City, Utah.

Ten Weeks for Ten Cents.—This is a "trial trip" offer to those who are not now subscribers to the American Bee Journal. Undoubtedly there are thousands who would take this journal regularly if they only had a "good taste" of it, so as to know what a help it would be to them in their work with bees. In order that such bee-keepers may be able to get that "taste," the very low offer of "10 weeks for 10 cents" is made.

Now, dear reader, you cannot do a better service than to show this offer to your neighbor bee-keeping friends, and urge them to send on their 10 cents and get the next 10 numbers of the old American Bee Journal. In fact, *you* could afford to send the 10 cents for them, and then after the 10 weeks expire, get them as new subscribers for a year. They will be easy to secure then, for the 10 numbers will be a fair trial, and they will want the Bee Journal regularly if they are at all interested in bee-keeping.

Remember, it's *only 10 cents for 10 weeks*, to all not now subscribers to the Bee Journal.

A B C of Bee-Culture.—We have some of these books left, and in order to close them out quickly, we renew the low offers we made on them. This is the fine cyclopedia of bee-keeping by A. I. Root, containing 400 pages and nearly 200 engravings. The regular price is $1.25, but we will send the American Bee Journal one year and the "A B C" bound in cloth—both for only $1.80; or the parchment cover (very heavy paper) "A B C" and the American Bee Journal one year—both together only $1.50.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

No. 1.—Locating an Apiary—Bee-Management.

There are very few places in our Southern country where there are no honey-yielding plants. The location should, if possible, be near the forage. The best forage is found along the water-courses, and in the swamps and bottoms, but on account of malaria that usually abounds in such low places, it would be best to locate the apiary on higher ground. One or two miles is not too far for bees to go for forage. I have known them to go four miles, but this distance is too great to enable them to store much surplus.

HIVE ARRANGEMENT AND SHADE.

In our climate hives should be arranged with special reference to shade. I prefer the shade of fruit-trees. An arbor of the scuppernong grape vine makes a grand and dense shade. Other varieties of grapes often shed their leaves so soon that they answer a poor purpose. For a shade-tree that does not get overly large, and has a close, compact foliage, I can recommend the Caradeuc plum. While it is a shy bearer, the fruit is very delicious. Some varieties of the Japan plums also make good shade. The *Mimosa*, China-berry tree or pride of India, and the *Sterculia platanifolia*, or varnish tree, are fine for shade and very ornamental. These trees are only suited for culture in the Southern States. Where natural shade cannot be had, the next best shade is obtained by using pieces of boards for extra cover. The hives should be arranged with reference to avoid having the hot afternoon sun glaring upon the entrance. In fact, it is best not to allow this sun to strike the hive at all; for nearly all the damage to combs by melting is caused by the sun pouring on the hive between the hours of 12 m. and 3 p.m.

When starting to keep bees it is best not to commence with too many colonies. A half-dozen in well-arranged hives would be sufficient to start with. You must learn to handle them—practice must be combined with theory. Then as you gain knowledge you can enlarge your apiary to a profitable size. As knowledge in bee-culture can be conveyed and obtained more rapidly by the eye than by any other means, a few days spent in some well-conducted apiary, under the direction of an expert apiarist, would be of immense benefit.

MISTAKES MADE BY BEGINNERS.

Beginners often make great mistakes in making their first purchases. Instead of consulting some skilled, practical and reliable bee-keeper, as to the articles they need, they consult some voluminous catalogue of bee-keepers' supplies, and pick out at random articles that are not worth a pewter sixpence to any practical apiarist. Of course their money is spent to no purpose, and quite likely they will soon abandon the business in disgust. The beginner should be provided with one or two good bee-books, which should not only be read but studied; and, besides, should take the American Bee Journal, or some other good bee-paper.

I find many persons who keep bees are not book readers, but they will take up a bee-paper and snatch out an idea. It is to this class that I more especially address myself, and I intend to make my talk on bee-matters plan, simple and practical.

KNOWLEDGE OF THE BEE NECESSARY.

One of the very first requisites towards successful bee-keeping is a knowledge of the nature and temper of the honey-bee, and of the means by which the insect's irascibility can be controlled.

The bee when out foraging never acts on the offensive—always on the defensive. But when its hive is threatened to be disturbed; or its stores taken; or when excited by disagreeable odors; or by persons standing in its range of flight; or by striking at it or pinching it, etc., its actions may be both defensive and offensive.

WHAT TO DO WHEN STUNG.

When stung, the sting should be immediately removed, or the strong muscles that drive it, and still adhere to its base, will force it deeper into the wound. It should always be scraped out, and not pulled out with the thumb and finger,

which would squeeze the poison-sac and inject more venom into the wound. When stung, remove the sting as *quickly as possible*. If stung on the hand, *instantly* pass it against the corner of the hive.

In many cases the sting of a bee is attended with much pain and swelling, while in others there are no ill-effects produced whatever. There is no doubt that the system can soon become inured to the poison so that no bad effects are produced. The writer well recollects the time when a bee-sting was very painful to him, and was always attended with much pain and welling; but now he would rather, at any time, be stung by a bee than be pricked by a thorn.

Many remedies have been suggested for stings, and while they all may do good in some cases, in others they fail. As formic acid is the principal constituent of the poison, it seems that those remedies that contain an alkali—such as ammonia, soda, etc., prove the most efficacious. A continued application of cold water to the part stung is most excellent, and usually prevents the pain and swelling. Tincture of iodine applied to the wound is said to be efficacious.

While it is impossible to work much among bees and never get stung, it is also possible in most of cases to keep them "peaceably inclined," so that stings need be few and far between. One person possesses no more "charms" in handling bees than another, if the same laws and rules are observed.

DIRECTIONS FOR HANDLING BEES.

In all our operations with our bees we must use gentleness. All quick, sudden jars and motions irritate them. Bees are always more gentle and less inclined to sting when they are gathering plenty of honey; and at such times the hives can be opened with very little danger; whereas, when there is a dearth of honey, the inmates of the same hive might show a great spirit of resentment.

I have observed that color exerts some influence on the temper of this insect. I have found that dark shades of clothing, and particularly red, are more distasteful to them than white. Hence, when working among them use light-colored clothes.

When opening a hive, always stand on the side opposite to the wind, and never in front of the entrance. It is bee-nature, when alarmed, for the insect to take to its stores and gorge itself with honey. When in this condition they never sting unless struck at or squeezed. Most writers tell us that this engorgement of the honey-sac soothes the anger of the insect and makes it peaceable. While this is partly true, in the main it is incorrect. When the honey-receptacle is engorged, the abdomen is much distended, which deprives the bee of making the necessary muscular action of this portion of the body in order to bring the sting into a proper position for a thrust.

In order to guard against bees crawling up the arms and legs, it is best to confine the sleeves at the wrists with elastic bands, and to pull the socks over the bottom of the pants. It is best not to work among bees after dark, for they cannot see to fly, and at such times are great at crawling, and will "poke their noses" into every little opening about the clothing.

Canadian Beedom.

Conducted by "BEE-MASTER."

A Cold Snap.

After preternaturally warm weather for about two weeks, during which the thermometer several times hovered between 90° and 100°, there came on Sunday, May 12, "a frost, a nipping frost," the mercury going down in the most favored parts of Canadian beedom to 24° or 26°. A clean sweep is made of the fruit-blossoms, hence the supply of honey from that source will be *nil*. But probably the most serious injury to the bee-keeping industry will be from the chilling of young brood. The unusually hot weather for two weeks previously had stimulated brood-rearing to the greatest possible extent, and no doubt many colonies found it impossible to nourish their babies in a sufficient degree to keep them alive. The extreme cold has now continued for a whole week. Last night (May 19) ice formed to the thickness of a quarter of an inch. For a week there has been no let-up to admit of an examination to what extent colonies have been checked and injured by chilled brood.

The 10 nuclei from Florida, spoken of in a previous issue of Canadian Beedom, arrived on May 11, and it will be interesting to note, when it is possible to do so, how they have stood a whole week's exposure to weather which at this time of the year may, without exaggeration, be called "Arctic." However this particular importation may turn out, it is rather a damper on the project of getting bees from the South with a view to profit from building nuclei up into strong colonies capable of yielding a remunerative surplus of honey the same season.

Bee-Keeping as a Specialty.

The editor of the Bee-Keepers' Review is frank enough to own that there are places where bee-keeping can no longer be followed successfully as a specialty, because the returns are too uncertain, and says he sees no good in trying to make it appear otherwise. This is a sensible view to take of the subject.

Celery-growing is pursued as a specialty in the vicinity of Kalamazoo, Mich., but there are few localities in which this can be done to advantage. The soil and climate are specially adapted to this crop. In many places this vegetable is grown under difficulties. It can be done, but it is at a disadvantage. The same fact should be recognized in regard to bee-keeping. In districts particularly well adapted to this pursuit, it is wise and well to follow it extensively; in others less favorably situated, it should be carried on with caution, not putting all the eggs into one basket, lest peradventure there may be a spill.

Five-Banded Bees.

Part of the report of the Michigan State Apicultural Station, published in the Bee-Keepers' Review.

Having a desire to test the so-called five-banded bees, I introduced two queens of this variety in the spring of 1894. As in the case of so many other experiments, the unfavorable character of the season prevented anything like a fair test to their abilities as honey-gatherers, yet it can be said that nothing appeared to show that they were lacking in this respect. Though called "golden Italians," I would have pronounced them anything but Italians judging from the disposition they exhibited. While they are not the most irascible of bees, they are yet very nervous and quick to manifest a recognition of intrusion, from which characteristic I should have judged them to be largely of Syrian blood. But the most marked characteristic exhibited by at least one of two colonies was an inclination to rob. If there was any attack to be attempted on a colony, or by chance to pry into a case of honey, about one-half the would-be thieves, out of a large apiary, were from one or both of these colonies. It is to be hoped that this peculiarity may stand them in stead in the gathering of nectar when an opportunity occurs.

Lapeer, Mich. R. L. TAYLOR.

E. E. Hasty, in his "Condensed View" says: "Mr. Taylor also reports four cellar-placed colonies, with everything right as far as could be seen, but bees all dead. They differed from the live ones simply in being 'improved' five-banded stock. Lend us a pin to stick here, somebody.———Knowing smile of the 'told you so' species, from Mr. Alley."

Probably the same kind of "knowing smile" will overspread the faces of others who might be named, for it cannot be denied that there is a very general impression among bee-keepers who have no axe to grind, that these five-banded beauties are apt to show a certain delicacy of constitution.

Bees in Manitoba.

The following appeared in a recent number of the Farmers' Advocate:

This is the earliest I have ever taken my bees out of their winter quarters. April 7 was the earliest until this year, when I took them out on April 1. They are in better condition this year than I ever had them before—plenty of bees, and plenty of stores, and all healthy. About 80 per cent. of the number I put in last fall came through all right. They are gathering a little pollen already.

I had very good success with them last season. I got about 100 pounds of extracted honey from each colony. I use the Jones hive and find it the best for general use, for gathering honey and for putting them away in the winter. I have used the Langstroth and found it all right as far as the storing of honey went, but as there is no space to pack with

chaff, the bees did not winter as well in it as in the Jones hive. I have discarded the combination hives, as I found it did not pay to have too many kinds in operation. G. G. GUNN.

Gonor, Manitoba, April 11.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Italianizing and Keeping Bees Pure.

I have purchased nine colonies of hybrids and blacks, four of them being hived in old hives, which seems to be contrary to G. P. Hachenberg's experience, as related on page 287.

I am desirous of Italianizing my hybrids, and, of course, refer to my text-book, and there I am advised to purchase a choice tested queen and rear my own queens from her. So far, so good; but after this choice queen has reared Italian stock, and I proceed to rear queens in that hive, how am I to get sufficient virgin queens mated to queen nine colonies, when I have only the one colony of Italians, all the rest being hybrids? A. R. G.

ANSWER.—No, you're not very badly mixed, but you may as well make up your mind that keeping bees pure is not as easy as keeping chickens or cattle pure. Your tested queen will in a few weeks be surrounded by a family of pure Italian workers and drones, but as you suspect, the virgin queens reared from the tested queen will have a better chance to meet black than yellow drones. You may use drone-traps and suppress all but the yellow drones, but very likely your neighbors will furnish a good supply of dark drones. But if you requeen all your colonies from the tested queen, these new queens, even though they meet pure black drones, will rear pure Italian drones, or at least practically so, and next season all young queens will have a much better chance to meet yellow drones. So you can go on, constantly weeding out undesirable stock, but you may have to do more or less of that weeding for years if black bees are aronnd you.

You may buy untested queens for each one of your colonies, and the chances of your young queens will be better. Suppose you buy a tested queen of the very best kind for each colony. New queens will be reared next year, whether you will or no, and with black or hybrid bees all around you the chance for impure mating will be pretty good. I think you will find it a work of time to have all pure Italians, no matter what your plan, unless there are no impure bees about you.

Transferring and General Management.

I am just making a beginning in bee-keeping this spring. I already have a colony in a box-hive, and I have purchased the increase from the colonies of some of my neighbors, I furnishing the hives (which are the 10-frame Dovetailed) to put the new swarms in.

1. I wish to transfer the bees in the box-hive to one of my new 10-frame hives, and propose following "Heddon's short way"—that is, drumming a portion of the bees and the queen from the old hive into a forcing-box, and then giving them to the new hive, and allowing the old hive to stand for 21 days, when the brood will be hatched, and can then be driven into the new hive. Do you think well of this plan? a—If the old hive and brood with a portion of the bees are allowed to stand for 21 days, will they not rear a queen? and if so, what shall I do with her? b—Will the bees of the new hive receive kindly the newcomers from the old hive at the expiration of 21 days?

2. My hives are all 10-frame, with full sheets of foundation in the frames. In hiving swarms, shall I give them the 10 frames at once, or a lesser number, using the division-board?

3. Should the super and sections be put on at once when a swarm is hived? or not until the frames in the lower story are pretty well filled?

4. What is the best way for artificial swarming?

5. My place is surrounded with great apple orchards, which blossomed very profusely this spring, but my bees paid no attention to them. Can you account for this?

Ben Avon, Pa. H. P. J.

ANSWERS.—1. The plan is good. a—Most likely the young queen will be there all right, and if you are anxious for increase you can make another "drive" and put all the bees in a new hive, or you can unite all with the first "drive," and the bees will take care of the queen-business without any attention on your part. b—Yes, at that time, while bees are busy gathering, there is little trouble about uniting bees in any sort of style. After the harvest has closed they don't take so kindly to newcomers.

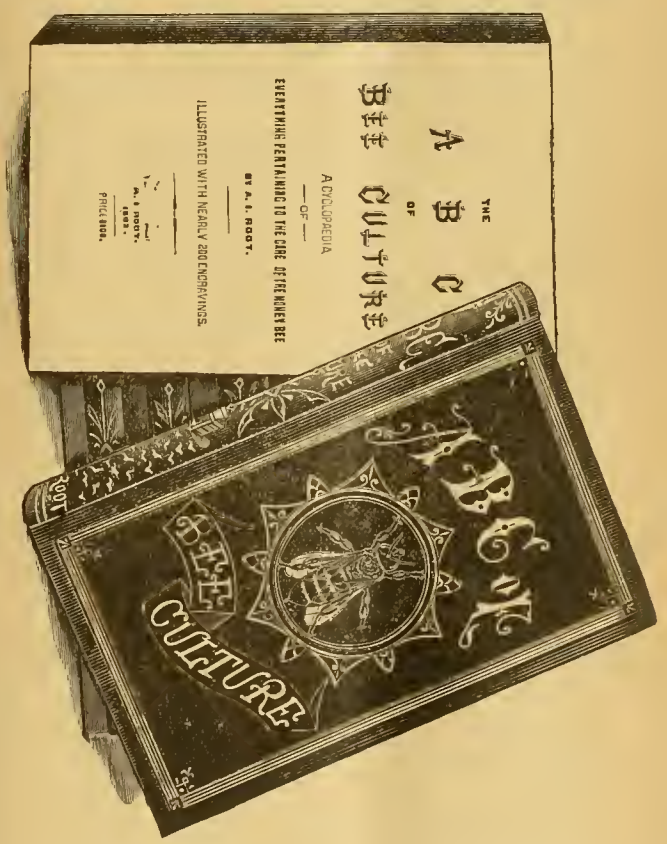
2. In working for comb honey, better give only about five frames at the start, then add the remainder when these are filled.

3. Don't put on sections at once unless you have a queen-excluder over the brood-frames. And don't wait for the frames to be pretty well filled, but put on sections in perhaps a couple of days, when the queen has got fairly to work laying.

4. That's a hard question. Depends much on what you have, what you want, what you know, your pasturage, and perhaps other things. On the whole, I think the best thing is to read up in the books, then try to decide what plan will suit you best. In a place like mine, where it is a somewhat uncertain matter what will be in two weeks from any given time, I like the plan of starting nuclei, then as soon as the young queen gets to laying fill up so as to make a full colony by taking one or two combs with adhering bees from each colony that can spare. In that way you are not caught with a lot of weaklings by a sudden stoppage of the honey-flow.

5. I am not sure I can. If the weather was too bad for bees to be out, of course they would not work on fruit-bloom, but if weather was such that bees were flying freely, and they paid no attention to apple-bloom, I should say there was something they could do better on, but I have not the slightest idea what it might be.

A Big Offer.—Send two new subscribers to the American Bee Journal for one year, at $1.00 each, and get as *your* premium a free copy of Root's "A B C of Bee-Culture" bound



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Editorial Budget.

Memorial Day has come once more, and again with beautiful flowers will be decorated the graves of our Nation's heroic dead. In commemoration of the solemn event, a song —"When Should the Nation Forget?"—is published in the Bee Journal this week, which doubtless will please many of those who can sing. Have the whole family learn it, and make the "chorus" ring.

Rev. E. T. Abbott's Labors as lecturer on Practical Apiculture and the Poultry Yard, at Institutes under the care of the Missouri State Board of Agriculture during the the past year, have been highly appreciated by that body, and he is again engaged in the same capacity for another series of lectures. The appropriation for farmers' institute work, made by the 38th General Assembly of Missouri, is $6,000, which with about $2,000 still in the hands of the State Board, will enable them to hold about 40 meetings during the next biennial period. Missouri is moving on!

Please Mention the Bee Journal when writing to any of the advertisers in this paper. You may think it unnecessary to do so, but to the advertiser and to the publishers of the American Bee Journal it is a very important matter. By saying, "I saw your advertisement in the American Bee Journal," you will be showing the advertiser where it pays him best to advertise, and also it will help the publishers of the American Bee Journal to hold such advertisers regularly, as they will patronize more liberally those papers that bring the most returns. So please don't forget to always mention the Bee Journal when writing to its advertisers.

This Number Closes Three Years of the American Bee Journal under its present management. Having scarcely any acquaintance with bee-keepers three years ago, it was indeed a risky thing to take the responsibility of conducting this journal, especially as I was to follow one who had successfully edited and published it for nearly a score of years. But the years have come and gone, and still the old American Bee Journal moves on, and now gives promise of greater success in the future than it has ever enjoyed in the past.

I feel deeply grateful to all who have so kindly assisted and encouraged me in my arduous but pleasant labors, and truly I have never had any cause for complaint of the lack of the most cordial letters of appreciation of my efforts since assuming the editorship of the American Bee Journal. I was reminded of this fact, upon receipt of the following letter, dated April 26, 1895, writen by one of those who reply to queries in the Question-Box department, and who lives east of Chicago:

FRIEND YORK:—I am pleased to see that there is no *retrograde* in the American Bee Journal. "Excelsior" seems to be your motto, and progression your rule. This is as it should be, and is the only way by which you can expect the support of the bee-keeping public.

I have watched your course as a bee-editor closely, and have found that you was constantly "keeping up to the mark," and leading (as you should) rather than following. I have admired your manly, independent course, and have been pleased to see that no favoritisms have crept in, and that you have ever been fair and impartial.

I trust that you will continue as you have begun, and will not weary in well-doing. * * *

Though I have never claimed to be super-human, and have only endeavored to do my duty as I saw it, still there is a satisfaction in feeling that my efforts have been, and are, appreciated by those who take and read the American Bee Journal for the apicultural information which it contains.

Another of the "repliers" in the Question-Box (after reading the exceedingly foolish, yet amusing, criticisms of the American Bee Journal and its editor, made by some), sends the following, which *he* thinks quite aptly illustrates the case in question:

FRIEND YORK:—After having read certain senseless criticisms of yourself and the American Bee Journal, I was reminded of this story:

A man in a public position was belabored by an envious rival to whom he paid no attention. Some of his friends said: "Why don't you silence the fellow?"

He replied: "I once knew of a little dog that would go out night after night and bark at the moon. Would bark at it by the hour."

His friends waited for him to finish the story, but he remained silent, and they said: "Well, what of it?"

"Oh, nothing; the moon kept right on."

Friend York, the American Bee Journal may as well take the part of the moon. * * *

The Toronto Convention.—Secretary Hutchinson desires this notice given in regard to the next meeting of the North American Bee-Keepers' Association:

The North American, as we all know, will hold its meeting this year in Toronto, Canada, during the Industrial Fair in September. Bro. Holtermann has already secured the auditorium of the Norman School as a place for holding the meeting. It is none too soon now to begin thinking about a programme, and I would be thankful if bee-keepers would write to me and suggest topics that they would like to have on the programme. W. Z. HUTCHINSON, *Sec.*
Flint, Mich.

Hon. Geo. E. Hilton, who is a member of the Michigan legislature, is also a well-known bee-keeper and supply-dealer. A correspondent at Lansing, in one of a series of letters to Mr. Hilton's county newspaper, had this to say in his letter published May 9:

Hon. Geo. E. Hilton returned from a week's stay at his home yesterday. He is receiving many congratulations from his colleagues upon the fact that he is the proud father of a nice little girl. Time bears out the prediction made in the first of this series of letters, that Mr. Hilton would prove to be one of the most popular as well as active and useful members of the House. No man is more highly respected than he, and no man in either House has more friends. He has much influence, and it is needless to say to Newaygo county readers that it is never exerted in a bad cause.

It seems to be invariably the case that wherever a bee-keepor is elected to some important public office, a good man is found. The Bee Journal congratulates both Mr. Hilton and his constituents.

Ten weeks for ten cents. See page 345.

Giant Bee of India.—Ruth E. Taylor, of Bellona, N. Y., the Secretary of the Ontario County Bee-Keepers' Association, sends the following "Petition," with the request that it be published in the American Bee Journal:

WHEREAS, The Honorable Secretary of Agriculture, in his last report to the President, says: "The Entomologist strongly recommended as a part of the work of this fiscal year, the attempt to introduce into the United States from Ceylon the giant bee of India;

WHEREAS, It now remains with the bee-keepers and farmers to unite in petitioning the proper authorities to carry out the work recommended by the Entomologist; therefore, be it

Resolved, That we, the bee-keepers of Ontario County, New York, in convention assembled, respectfully ask the publishers of the bee-papers to print and distribute with their paper a petition to be circulated by each subscriber. The extra expense to be shared *pro rata* by the various bee-keepers' societies throughout the United States.

Signed, C. A. OLMSTEAD,
E. H. PERRY,
EDWIN HUTCHINSON,
RUTH E. TAYLOR, *Sec.* *Committee on Resolutions.*
Bellona, N. Y., May 6, 1895.

It seems to me, that, so long as nearly all the testimony is against the feasibility of getting any benefit from "Apis dorsata," it would hardly be a desirable thing to go to any expense in the matter. If the government has any money to spend in advancing the interests of the bee-keepers of the United States, I think there are scores of other ways in which it could be applied that would result in infinitely more good to the pursuit in general. If the North American Bee-Keepers' Association could secure a grant from the goverment, such as the Ontario (Canada) Bee-Keepers' Association has, I believe much more practical benefit would come out of it than to spend the same amount on an effort to domesticate the "big stingers" of India.

By the way, I have yet to hear that very many of our best and leading apiarists are asking for the importation of "Apis dorsata." If more than a half dozen of them are really in earnest about the matter, it will be news.

Hon. Eugene Secor, of Forest City, Iowa, has been publishing a valuable series of articles on "Tree-Planting," in his local newspaper, in which he considers the questions, what to plant, how to plant, and where to plant. He advises against such varieties as the cottonwood and the Lombardy and white poplars, and points out that there are at least 50 varieties of decidous trees of much higher commercial value, which do well in the Northwest, besides a very fair list of evergreens and conifers. He suggests dealing direct with growers of stock rather than with agents, who may or may not be reliable, and he urges the planter to get reliable information, as a means to which he calls attention to the fact that there are five horticultural societies in Iowa, not run to make money, but to disseminate information such as the planter needs.

No better authority on this subject, than Mr. Secor, could well be found. Honey-yielding trees will also have a chance.

Unlawful to Adulterate Honey.—A subscriber living in California, in a letter dated May 14, writes thus:

I heard that the recent legislature of this State passed an act making it unlawful to adulterate honey. Shortly after the adjournment of that body Gov. Budd signed the Act, and it became a law. I have not seen the Act, and do not know much about it. I am not sure that the person who told me about this law read the item or telegram rightly, but I am inclined to think he did. I will look the matter up some day that I happen in a law office, or meet one of the members of the late legislature.

Bee-keepers will be interested to know all about this. I trust our good friend who reports the above, will soon find out all about it, and send whatever he learns in regard to it.

Among the Bee-Papers

Conducted by "GLEANER."

WHAT TO DO WITH UNFINISHED SECTIONS.

The best and most profitable way for the average bee-keeper to dispose of unfinished sections, I am convinced, is to extract all that will not sell as second grade for as much as extracted honey will bring, and use them for bait sections the next season. There is a value in these nice, white combs for this purpose, that is not appreciated by very many.—H. R. Boardman, in Gleanings.

LINING FOR SOLAR WAX-EXTRACTORS.

The best inside lining for a solar wax-extractor of small size is Russia iron. Zinc and galvanized iron would darken the wax, and, besides, would reflect back too much of the light. Of course, if you can get an asphaltum that will not be affected by the heat or the wax it will make no difference what metal you use. The asphaltum used by photo-stock dealers for painting developing-trays would be about the thing. For large-sized extractors there is nothing better than matched boards of butternut-wood, or something that will not shrink much. These, of course, should be painted black.—Gleanings.

BEE-PARALYSIS—CONTAGIOUS, BUT NOT HEREDITARY.

T. S. Ford, of Columbia, Miss., in Review, takes the ground that bee-paralysis is contagious and not hereditary. The introduction of an infected queen would infect a colony, but an infected worker, he thinks, would do the same thing. He says:

"The discussion in reference to this subject that has been going on at intervals for the past year has led me to believe that the disease is not so virulently infectious as I first believed. The rapid spread of the infection through my own apiary may have been due to the fact that my hives were all under one shelter, and not over a foot apart. Doubtless it is a daily occurence for bees to enter the wrong hive by mistake and in this way diseased bees could infect a healthy colony. And if it spreads by contact as Baldensperger thinks, robber bees in the act of cleaning out a diseased colony could get the bacillus, and in this way carry home the seeds of the malady."

SPREADING BROOD IN SPRING.

There is much said recently in the American Bee Journal about the practice of spreading brood in the spring, the majority taking ground against it. It is very safe advice when applied to the bee-keeper in the cold corners of the East; but here in California the spreading of brood can be indulged in with but little danger to the colony, and it is largely practiced here in the spring. It is safe to say that all of the leading bee-keepers do thus enlarge the brood-nest, and equalize until the honey-harvest commences. It pays in dollars.—Rambler, in Gleanings.

AN AVERAGE YIELD OF HONEY.

I think some will read with a little surprise the statement of Chas. Dadant (page 293) that their average yield does not exceed 50 pounds of extracted honey per colony. It only shows that he observes more closely than the majority. For I have an idea that a great many suppose their average yield to be away above what it is, and would be somewhat surprised at the result if they should keep an accurate record and figure the average. Even those who do keep a record have a kind of misty idea that their average is a good deal more than the figures will show. Such a one will think: "My average crop is about 75 pounds, but for the past seven years the crop has always fallen below the average, never exceeding 50 pounds." He's waiting for his crop to come up, but doesn't seem to think that his average has been pulled down to perhaps 30 pounds.

SECURING THE BEST BEES.

B. Taylor, in Review, tells how he manages. The colonies that first build up and swarm are the ones he breeds from. The mother colony is left on the old stand so as to be strong to rear good queen-cells, and these cells are used for others. He further says:

"After I have started enough nurseries in this way to supply me with queens, each swarm is set where the parent colony stood, the supers are moved to it, a queen-excluding honey-board being put under it, and the parent colony moved to the other end of the same stand, with its entrance turned in the opposite direction from the new swarm. I want all the

field-bees in the new swarm to keep it strong, for it is from these new swarms that comes 80 per cent. of the white honey crop.

"I can get more white honey by hiving these new swarms in hives with only starters of comb foundation in the brood-frames. In theory I do not intend to winter these colonies, but to work them for all the surplus they can be *forced* to produce, then unite them in the fall with the parent colonies .....This I do by setting the prime swarm on top of the parent colony with a queen-excluding honey-board between them, having first removed the old queen. If the new swarm is very populous, I will set the two together without the honey-board and winter them in the two-story hive; in fact, this may be the best in all cases where the colonies are very strong in bees."

DRONES AND SWARMING.

Says Doolittle in Gleanings: "There are a few bee-keepers who argue that, if all drones and drone-comb are kept out of the hive it would be, to some extent, a preventive of swarming; but with me I have failed to see that this matter of drones has had anything to do with the matter of swarming whatever; for I have several times had hybrid colonies in my apiary, from which I have taken all drone-combs, and not allowed them to rear drones, because I did not want my young queens to meet such drones; yet, so far as I could see, these colonies swarmed as promptly as did those having drones. From my experience in the past I would say that it is not practical to try to keep all drone-comb out of any hive, but, rather, have *just one* frame in each and every hive, having from six to twelve square inches of drone-comb in it, and have such comb stand in a certain place in each hive, so that the apiarist may know just where it is; then every 20 days open the hives from which it is desired that no drones shall fly, and decapitate them, thus making a sure thing of the matter, and fully satisfying the bees.

TWO-STORY BROOD-CHAMBERS.

F. L. Thompson, in his interesting "Notes from Foreign Journals" in Review, says: Dr. Metelli (speaking of the idea that some bee-keepers have, that one story of deep frames for the brood-chamber of the Berlepsch hive is preferable to two stories of small ones) says it is wholly theoretical to suppose that two bars and a bee-space are an obstacle either to the queen or the bees, and not borne out by practice; and calls attention to the way in which the bees work in separatored section supers, which are perfect labyrinths.

MAKING DOVETAILED HIVES.

Rambler reports in Gleanings a new kink in putting together dovetailed hives, as practiced by P. J. Morely. A piece of tin bent at right angles, long enough and wide enough to cover the ends of the dovetails, is securely nailed to the corners of the hive. There was no chance for sun and rain to get in their warping effects.

Notes AND Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

How to Tell Robbers.—"In what way can we distinguish robber bees?" President Abbott replied, 'Watch and see if they bring out any honey.' Our experience in bee-keeping does not fit that reply at all, which we think of no value to the beginner because he could not tell whether bees came out loaded or not. We think we can give a much better answer."—Heddon.

I think there must be some mistake about this answer, for I do not believe I ever gave it; but possibly I did, and for the sake of not leaving it in the world without a father, I will become responsible for it. Before we discuss the subject any further, let me put the "much better (?) answer" beside this one, that they may be readily compared and both stand on their merits: "Robber bees may be readily distinguished by their cautious, flitting, dodging, sneaking, guarded movement (sic) as they hover about the entrance in fear and doubt about the advisability of entering. Their legs seem to hang down like a blue heron's in flying to and from the nest." This answer reminds me of a criticism I once heard a friend make on a sermon. He said: "It had a diarrhea of words and a constipation of ideas," and Mr. H.'s answer seems to be troubled in the same way.

Now, how is a beginner to tell how a blue heron's legs hang, if, like myself, he is not sure of ever having seen one? Then the bees' legs do not hang like the heron's, but *seem* to hang in that way, so the matter becomes still more complicated, even though the unfortunate beginner has been so favored as to be conversant with all the movements of the "blue heron." But to be serious, it seems to me that a beginner should recognize a bee filled with honey about as quickly as he would that "cautious, flitting, dodging, sneaking, guarded movement" which makes up so much of the "better answer." I know there are some things connected with the successful handling of bees which cannot be explained by word of mouth or on paper. They must be learned by actual experience, or by what they call "practicums" at the Pennsylvania Agricultural College. After one has had a real, practical demonstration of robbing, I do not think he will ever be troubled any more to know just when it is going on.

But why have any robbing at all? It is always an indication of bad management. The best cure for robbing is prevention, which means neatness and despatch in all work about the apiary, keeping a sharp eye on every colony to know its exact condition. But in our hurry we will sometimes neglect things, and almost before we are aware of it we will have a bad case of robbing on hand. At such times I have not found anything better than a good hand spray pump. Put a little carbolic acid in some hot water and mix it thoroughly. Put this mixture in a pail of cold water and give the hives and bees a good sprinkling, and it will generally put a stop to the robbing for the time being.

A pane of glass set so it will lean against the front of the hive which is being robbed is also of great benefit, as it confuses the robbers and prevents them from finding their way into the hive. I saw this in some of the journals several years ago, but do not know to whom the idea belongs. All of these things are of more or less benefit, but in the hour of an emergency a bee-keeper is compelled to depend largely upon his own inventive genius. If he has none of this element in his make-up, he is apt to go to the wall. If he is a born bee-keeper, he is bound to succeed, even though he has but meager information on the subject.

If I were giving advice to a beginner as to how to manage an apiary I would say, read all you can on the subject, and then when the time comes to act, use the dictates of your own best judgment, as it is very hard to give instruction which will apply to all cases.

Pears Self-Impotent.—"Not one single Bartlett flower had set fruit when pollinated with Bartlett pollen, no matter what the source."—Bulletin No. 5, Department of Agriculture.

This is quoted from an exceedingly valuable Bulletin which can be had for the asking, by addressing the Department of Agriculture, Washington, D. C., and calling for Bulletin No. 5, on the Pollination of Pear Flowers. Every bee-keeper should read it, as it sets forth clearly and conclusively the importance of the bee in securing a perfect pear crop, and in some cases any pear crop at all. I might quote at length and offer comments, but I much prefer that all who are interested send and get a copy of the pamphlet and read for themselves. I think the bee-keepers of the country owe "special agent" Waite a vote of thanks for producing such a valuable addition to the literature of this important subject.

Weighing Bees.—"Try the spring balance."—Gleaner.

Why try either? What use does any ordinary bee-keeper have for a device for weighing bees, anyway? One cannot tell the location of the stores by any method of weighing; and, if the honey is not in the right place in the hive, it may just as well be in the moon so far as doing the bees any good during a long, cold spell. Do not weigh the colonies with any kind of scales, but examine them with your *eyes* and heft them with your *hands*. An experienced bee-keeper will know at a glance if the conditions are favorable. There is not money enough in bees to spend any time at such useless work as weighing hives. This is all well enough at the experiment stations, but the ordinary mortal who expects to make money out of bees must learn to take a shorter cut than this.

That New Song—"Queenie Jeanette"—which is being sung everywhere, we can send you for 40 cents, postpaid, or club it with the American Bee Journal for one year—both for only $1.10. Or, send us one new subscriber for a year (with $1.00), and we will mail you a copy of the song free.

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At **lowest prices** are what we are all after. The **QUALITY** of Cary's Goods has never been questioned. His XX White Thin Foundation and Polished 1-Piece Sections are the Finest on the market. His

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He has the largest Stock of

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in New England; and as to Prices, you have only to send for a Catalog and compare them with those of other dealers.

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Reared from a Queen valued at $50. Can't be excelled as honey-gatherers; 75 cents each. Address

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Are bred for Business, Beauty & Gentleness. He makes a Specialty of breeding Fine Italian Queens that rank with the best in the world. Untested Queens, in May, $1.25 each; June $1 each, or 6 for $5.00; July to October, 75c. each or 6 for $4.25. Tested Queens, $1.50 to $2.00 each. Send for Free Illustrated Circular to— **THEODORE BENDER,**

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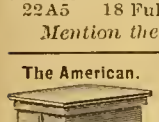

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19A8 Please mention the Bee Journal.

GARDEN CITY, Kan., May 13, 1895.

P. J. THOMAS, Fredonia, Kan.—

Honor to whom honor is due. The Queen you sent me proved the best out of six I bought from different Breeders.

J. HUFFMAN.

Big Yellow Golden Italian Queens 75c

Three for $2.00. Three-banded, same price' 1-Frame Nucleus, with Untested Queen, $1.75 2-frame, $2.25. Satisfaction guaranteed.

P. J. THOMAS, Fredonia, Kan.

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COMB FOUNDATION MADE CHEAP.

8c. a lb. for Brood and 12c. per lb. for Extra Thin, when Wax is sent to me; and I will guarantee that there is no better made. Price-List and Samples free to all. **August Weiss, Hortonville, Wis.**

15A8 *Mention the American Bee Journal.*

General Items.

Extracting Honey—Lively Twins.

I just finished putting on the second surplus cases to-day. I have taken about 8 or 10 gallons of fine willow and locust honey, and think I have perhaps a barrel, which I mean to extract as soon as I find time. I have 30 colonies, all in fine condition.

Since I last wrote, our home has been blessed with twins—a boy and girl; they are now 15 months old, and I tell you they are a lively pair. We are bringing them up on milk and honey, and their plump, rosy cheeks show what a blessed thing it is.

ALBERT VOUGHT.

Illawara, La., May 8.

Good Prospect for Honey.

The bees are doing pretty well now. I have 60 colonies left out of 80. It is pretty cold weather to-day—45 degrees. The prospect is good for honey. The white clover promises to be good. We cannot say anything about the basswood yet. The spring is ahead this year in comparison with last year. The fruit-bloom is over, but it did not yield much on account of the rainy weather. JNO. ROLLER.

Richwood, Wis., May 11.

He Thinks they Froze.

In reply to Mr. E. T. Abbott's questions on page 283, on the subject of bees freezing to death, I will say that the colony was an extra strong one, and as healthy as I ever saw, for I had noticed them just a few days before, as they came out for a flight. The bees were all over the combs, which were half full on the top edge next to the top-bar. When I found them all dead I looked no more, for I said to myself, "Frozen to death, for certainly they would have shown some sign of disease ere now." Also, if they had starved, certainly it was not for the lack of honey, and all this honey right under them.

I don't say I know they froze, but I think they did. J. A. BEARDEN.

Cyruston, Tenn., May 10.

Brighter Apicutural Prospects.

The prospect now is for a brighter future in apiculture, if only timely showers come to hand. Bees at this time are on a sound (financial) basis, and every bright day are getting in their work. The apple-bloom made the orchards look like a veritable fairy land, and the bees paid profound respect to every blossom. The locust is now bending in mature bloom, and while it will last but two or three days, the busy workers make it a glorious holiday from early morn until sun setting. The relationship between apiculture and horticulture is being more and more strengthened.

Frankfort, Ohio, May 11. D. A. CORY.

Bee-Keeping in Mexico.

I have 14 colonies of Italian-hybrid bees. Two years ago I increased them from one colony to 14, and have had in this time 250 pounds of honey besides. I sell the white comb honey at 25 cents, and the melted at 15 and 18 cents. I will increase my colonies to 25 this year, if I can. But then it will be hard to find a market for all the honey, because the Mexicans use honey only in sickness—only foreign families and a few Mexicans will buy comb honey. But this is, I think, because the Indians (the only bee-keepers until now) bring such bad and dirty honey to market, that only the druggists buy it, very cheap, and afterward clean it. Honey on the table-land is very cheap. From Tampico they ship it by the ton to New Orleans, mostly.

Bees work here all the year around, as well as swarm. I caught a swarm Nov. 2,

16 Years **Best on Earth**

Sent per mail on receipt of price.

Circulars and Doz. rates sent on application.

Doctor, 3½ in., Largest Smoker made...	$1.75
Conqueror, 3-inch stove.....	1.50
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Plain Standard, 2-inch stove	.70
Little Wonder, 1¾-inch stove.....	.50
Bingham & Hetherington Honey-Knife.	.80

T. F. BINGHAM, Abronia, Mich.

16A *Mention the American Bee Journal.*

FAVOR IS DECEITFUL BEAUTY IS VAIN.

-New York Queens-

The Beautiful Yellow Bee is going. I have a Strain of Bees hereafter I shall keep—it is the coming Bee for our Nortern climate, for Longevity, White, Perfect Capped Honey, Hardy and Prolific. Queens, $1.00 each. Having two aplaries, can sell the Pure Italian Queens at $1.00 each.

Mrs. Oliver Cole, Sherburne, Chen. Co., N. Y.

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BEFORE placing your orders for SUPPLIES, write for prices on 1-Piece Bass wood Sections, Bee-Hives, Shipping-Crates Frames, Foundation, Smokers, etc.

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Control Your Swarms, Requeen, Etc.

Send 25c. for samples of West's Patent Spiral Wire Queen-Cell Protectors, and Patent Spiral Queen Hatching and introducing Cage; & best Bee-Escape, with circular explaining. 12 Cell-protectors, 60c.; 100, $3. 12 cages, $1; 100, $5, by mail. Circular free. Address. **N. D. WEST, Middleburgh, Schoharie Co., N. Y.** Sold also by all leading supply-dealers. 22A5

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Italian BEES & QUEENS

Ready in May. Queens, $1.00. Bees by the Pound, $1.00. Two-frame Nuclei, with Queen $2 50. One-frame, $2.00. Also, **Barred P. R. Eggs,** for setting, $1.00 per 15.

Mrs. A. A. SIMPSON, Box 48, Swarts, Pa.

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FOR SALE.

I have some 35 good Bee-Hives to sell, with all the Frames and Honey-Boxes—some 10 are Heddon Hives, and 6 double 10-frame, balance 8-frame, with stuff for honey-boxes. Smokers, and some Foundation, Bee-Veils, and all the Fixtures for bee-keeping which I will sell for $2.00 per hive, and throw in all the fixtures. Big bargain here. Correspondence solicited. **SAMUEL CLARK, M. D.,**

22A2t LAWRENCE, McHenry Co., ILL.

Golden Italian Queens.

One	Untested	Queen	before June 1st....	$1.00
Six	"	"	" ...	5.00
One	"	after	"	.75
Six	"	"	"	4.20
One	Tested	" before	"	1.50
Six	"	"	"	7.50
One	"	after	"	1.00
Six	"	"	"	5.00

One Selected Tested for breeding, $3.00.

Price-List Free.

W. H. WHITE,

22A5t DEPORT, Lamar Co., TEXAS

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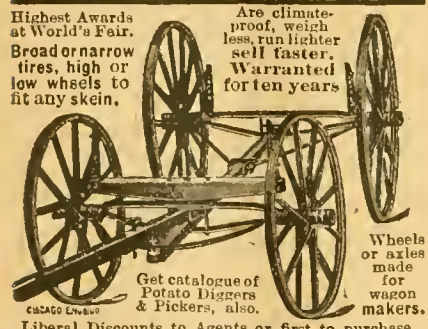
McCALLUM STEEL WHEEL WAGONS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For July and August only. To those who have never tried our strain of Honey-Gathering Italians, we will make this Special Offer for July and August only, to introduce our Bees in your locality: We will send one Warranted Queen in July and Aug. for the trifling sum of 50 cts. **Remember,** the Queens we are going to send out for 50 cts. are warranted to be purely-mated, and if not, send us a statement of the fact and we will send another free of charge. Only one Queen will be sent at the above price to one address. If you want any more you must pay full price as per Table of Queens in our Circular, which we mail with each Queen. Address all orders to—

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HELLO!

Had you noticed that we have a bee-journal in the South? Well, we have. Send us $1.00 and receive "THE SOUTHLAND QUEEN" one year. Fresh, Practical and Plain. Jennie Atchley begins a Bee-Keepers' School in it June 15.

A Steam Bee-Hive Factory. Send for Free Catalogue and Sample Copy of "The Southland Queen."

THE JENNIE ATCHLEY CO.
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GOLDEN QUEENS

Solid Yellow, $1; Yellow to tip, 75c.; darker 60c. Tested, $1 to $2. Breeders, $3. Best, $5. Samples of Bees, 2c. None better for Honey, Beauty and Gentleness. Ready now. Fully guaranteed. F. C. MORROW, Wallaceburg, Ark.

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PASTE That Will Stick ANYTHING.

We have finally succeeded in finding a Paste that will stick labels to tin, glass, etc.—just thing bee-keepers have wanted. It will do the business wherever any "stickum" is required. It is guaranteed to do the work. It is put up ready for immediate use, in the following size packages, and at the prices given, by express: ½-gal., 70c.; 1 gal. $1.00; 2, 3, 4 or 5 gals., 75c. per gal. It weighs about 8 lbs. to the gallon. Sample of Paste, postpaid, 25c.
Address all orders to—

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

and the last one Feb. 6, this year, and so on. There is no feeding at all, and no protection from cold. There are some chilly days, and on one of them I had about 100 bees killed by the cold, but they had been on a separate comb far from the cluster. Protection is needed in the rainy season, because the rains are so heavy. I put a pice of tin on every hive. When I had only 5 colonies I got two nice Italian queens and Italianized my colonies with them. And after a time I saw it was not possible to keep them pure, on account of the wild bees around here in the mountains. Orizaba is encircled with high mountains very rocky, some only a mile distant. The bees live there in the holes of the rocks, and only with dynamite can you get them out. So I have all hybrids, and am satisfied.

Now I have an extractor, and will get plenty of boney, and if I cannot sell it at a good price, I will make honey wine and vinegar. The bees get their food from orange, coffee, and the trees, shrubs and flowers in the mountains, from bananas and some alfalfa. Coffee, bananas, and sugar-cane are the most cultivated plants—we hardly see others. Sometimes the honey-flow is so that the bees fill 2 or 3 frames in one night. You will hardly believe it, but bees never stop to bring in honey except on rainy days.

F. BUSSLER.

Orizaba, Mexico, April 10.

Finding Queens, Etc.

If you have trouble in finding a queen, remove the hive to a new location and place an empty hive on the old stand (do this when the bees are flying). In an hour you can generally find the queen without much trouble, as you get rid of nearly all the old bees. After the queen is found, you can return the bees, or do as you see fit.

Bees did not winter well in this section. Some lost 50 to 80 per cent. I had one swarm this morning. More are preparing to swarm. E. M. HAYES.

Kilbourn City, Wis., May 9.

Wintered Poorly—Cool Weather.

Bees wintered poorly the past winter, and spring dwindled badly. Many colonies that could cover 4 to 6 frames April 1 cannot cover more than 1 to 3 now. Out of 38 laying queens I have only about a dozen that will be in connition to gather clover honey, providing there should be a flow from that source. I think, take the country generally, fully 75 per cent. of the bees that went into winter quarters are dead to-day.

The months of March and April, this year, were cold and dry. I do not think it rained more than three times in the two months, and scarcely any snow fell since February. The latter part of April, however, was all that could be desired by the bee-keeper, except too dry. May, so far, has done better. It has rained three times already, and is raining now; but the weather is very decidedly cooler to what it has been. It has been very warm, several times the mercury running up to 90 degrees. It is now standing at 53 degrees. The farmers have had a most excellent time to put in their spring crops. Wheat and grass give evidence of being a light crop. A big show for fruit of all kinds, except peaches—they winter-killed.

Kent, Ohio, May 11. L. G. REED.

Bottom vs. Upward Hive-Ventilation.

On page 278 appears an article by Dr. A. S. Martin, which is in direct contrast with my experience; and as he seems to be good authority, he will probably throw some more light upon the subject.

He says that bees spare neither time nor material to make their hive perfectly close in all its parts, and protests against top ventilation. Now here is my own experience: 28 colonies of bees were put into the cellar Nov. 7, 1895; 16 had an empty super under the hive, and were covered with two pieces of old rag carpet; 8 colonies had an

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Catalogue Free. JOHN NEBEL & SON, High Hill, Mo.

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I will send a Guaranteed 5-Banded Yellow Queen, bred from a Breeder selected from 1000 Queens (some producing over 400 lbs. of honey to the colony); or a 3-Banded Italian Leather-Colored Queen direct from a Breeder imported from Italy. Oct. '94—**at 75c.,** and a special low price for a quantity.

My secret is to sell an extra-large amount, which enables me to sell at low prices. Will run this spring 350 Nuclei—have 1 home and 4 out apiaries. **Booking Orders Now**—will begin shipping about May 1st. No Queens superior to my Strain.

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Full Description, nicely Illustrated, sent free. Also our PRICE-LIST of **Beautiful Yellow-Banded Bees and Queens.** If Queens do not give satisfaction, no charge will be made. Our Queen-Rearing experience covers 35 yrs. Our strains of Golden-Yellow Bees unsurpassed. **HENRY ALLEY,**
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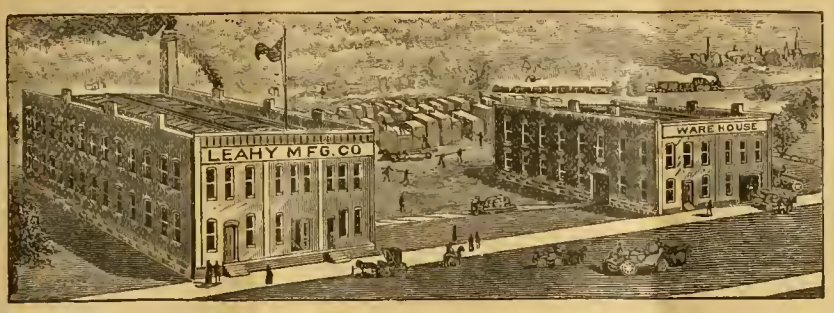

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APIARIAN SUPPLIES VERY CHEAP —"Amateur Bee-Keeper"—how to manage bees, etc.—25 cts. The "Model Coop." for hen and her brood Wyandotte, Langshan and Leghorn Eggs for hatching. Cat. free, but state what you want
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of water has made the vegetation. Now the sun shines—the Honey wells up—the Bees gather it, and every Bee-Keeper should have all needed **Supplies at once.** Catalogue Free.

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ONE-PIECE SECTIONS---CHEAP!

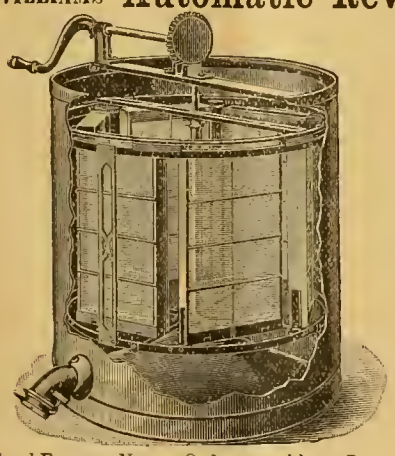
In Order to Reduce Our Stock, We Offer

No. 1 CREAM SECTIONS — 4¼x4¼x7-to-ft.; 1¾, 1⅞, 1 15-16 and 2 inch:
1000 for $1.50. 5000 at $1.40 per M.
10,000 at $1.35 per M.

No. 1 WHITE SECTIONS — 5¼x6¼x2, open on two 5¼ sides:
1000 for $2.50. 5000 at $2.35 per M.
10,000 at $2.25 per M.

G. B. LEWIS COMPANY, Watertown, Wis.

WILLIAMS' Automatic Reversible Honey-Extractor.



Perfect in Principle and Workings. Here is what the veteran bee-keeper, N. E. France, of Platteville, Wis., says of it: "I consider the Williams Automatic Reversible Extractor head and shoulders above any I have ever used; and furthermore, consider it the BEST on the market."

100 Italian Queens.

Reared in 1894. We make the readers of the Bee Journal **A Special Offer,** in order to have them move off quickly: for the next 30 days we will sell these Queens as follows:

One Queen reared in 1894	$ .75
6 Queens " "	4.00
12 " " "	7.00

These Queens were reared from fine stock and are right in their prime; they are a great bargain

☞ For Price-List No. 2, of Extractors, Bees and Queens—address,

Van Allen & Williams, Barnum, Wis.

P. S.—We have in one of our bee-yards, a few Mismated Queens—to those that want them, 25c. for one, 5 for $1. Stamps taken for single Queen. Send Express Money Order payable at Barnum, or P. O. Money Order payable at Boscobel, Wis.

empty super under their hives, with a ¾-inch pine board sealed tight to the hive; 4 colonies had sealed hive tops and bottoms. Now the result was, the 4 last-named wintered the poorest, then the second 8, and last and best, the 16 covered with two thicknesses of old carpet.

My bee-cellar is under my dwelling-house, 14x24x7 feet deep, sand stone wall 1½ feet thick; dry and frost proof when banked outside. The cellar has also plenty of top ventilation, and is as pure as a living-room, but the bees in the hives with sealed covers got wet and moldy. Some of my colonies are so strong that they have 9 frames of brood, and are working in the supers; that is very early for this part of the country.

Now for me, the sealed covers have seen their day. I am next going to find out how many thicknesses of carpet are required to produce the same result as the sealed covers. I believe that bees seal their hive up so tight because they are afraid of vermin. I think that is also the reason that they use pitch and gum of trees containing a turpentiny smell, as most vermin object to that smell. With me, bees do not seal up a hole or crack through which they can pass.

I hope if I am wrong in my opinion I may be set right, but my experience cannot be shaken. AUGUST BARTZ.

Chippewa Falls, Wis., May 13.

A Beginner's Experience.

I commenced the spring of 1894 with one 8-frame Langstroth hive and a good strong colony. I hived two swarms from the one colony. From the old colony and second swarm I got 40 pounds of good honey in section-boxes. From the first swarm I got nothing, and it was the larger of the two. It cast a swarm, and was left weak, and carried down what honey was stored in the sections.

My bees wintered grandly. I built a good stand with shed roof and ends, roof shingled, and with floor about 12 inches from the ground. I set the hives on the floor, and filled all space with dry straw flush with the front end of the hives, and had canvas hung in front of the hives. I could throw the canvas back on the roof on warm days, and let the bees have the sun. Through December, January and February it was very cold, any where from 7 to 15 degrees below zero. The stand was on the south side of a building. I had three ply of wool carpet on the honey-boards, turned back one inch at the front end, and the balance of the space filled with straw.

EDWARD FLETCHER.

Portland, Maine, May 11.

An Experience with Bees.

I commenced with one colony in 1866; they were very large black bees, and a large colony. The bees passed over the field where the hands were plowing, and they followed them to the tree where the bees soon went in. In a few minutes we cut the tree down, hived the bees in a tall box-hive, where they remained about a year, then died.

The next colony was in 1874, in a box-hive. Then I concluded to increase my stock. I built a shed 12 feet long, 3 feet wide, and 6 feet high, sloping at the top backward. For roof I covered it with one-inch planks, and planked up the back of the shed. The hives rested on a plank 3 inches thick and 20 inches wide, 2 feet from the ground. I also planked up the ends and front of the shed above the hives. Then there was one plank one foot wide with hinges on, to be raised up when I wished to examine the bees. The hives were about 8 inches apart. Two large locust trees 18 inches in diameter stand in front of these sheds.

The next shed is 14 feet in length, and is tall enough for two rows of hives—one facing southwest, the other northeast—20 hives in all, 5 box-hives, 15 portico hives, 8 frames, depth from 8½ to 11 inches.

About 12 years ago they had increased to 17; I lost 12 that winter; the next year in-

creased to 12, and have had some new colonies each year to the present time.

Four years ago I caught an Italian swarm which lived two years, and was killed by moths. They crossed with the blacks, and there are hybrids in every colony now. They are mostly blacks, and as gentle, I think, as Italians, as good workers, and strong.

On Oct. 9, 1894, I received an Italian queen reared from an imported mother; I took out a black queen on the 10th, and introduced the Italian on the 12th, by removing the honey-board and placing cage, wire side down, and quilt over them; in five days she was released from the cage by the bees, and received kindly. The moment I placed the cage on the frames the bees commenced to gather around it. I did not jar the frames. When I took out the frames to catch the black queen, she ran out in the grass about 4 feet, and about a handful of bees gathered about her as if to protect her. This is the first queen I ever introduced, and my reason was they stored no surplus for me. I think some bees are like some people—too lazy to work any more than they can help.

I believe in bees choosing their own queen. My bees remained on the summer stands all winter without any packing. It was a severe winter—coldest days being Jan. 12, 10 degrees below zero; Feb. 8, 10 degrees below, and many days about zero. Bees had flights on Jan. 7, and in February. On Feb. 17 they came out with very bad diarrhea, but soon got right again. It was the first disease ever in my apiary.

I have had many swarms to come out and go to the woods without any halt. I had hives out on a plank, not covered at all, and all right. I space my frames at the top by ⅞ inch No. 18 wire nails driven on each side of the frame near the end; top-bar of frame is 1x⅞. J. L. CRUTCHER.

Jett, Ky., March 25.

Send Twenty-Five Cents to the Currency Publishing House, 178 Michigan St., Chicago, Ill., for a copy of the "Financial School at Farmerville." Everybody is reading it. 22Atf

---

A Grand Bee-Smoker is the one offered by W. C. R. Kemp, Orleans, Orange Co., Ind. It has a 3-inch fire-barrel, burns all kinds of fuel, and is simple, efficient and durable. Send 100 cents for a sample smoker, and you will have a rare bargain.

Catalogues for 1895 have been received at this office from the following:—

Thomas G. Newman, Chicago, Ill.
F. A. Lockhart, Lake George, N. Y.
Theodore Bender, Canton, Ohio.
H. M. Orr, Selma, Calif.

Wool Markets and Sheep is the name of a weekly publication resulting from the consolidation of two former papers called "Wool and Hide Shipper," of Chicago, and "Wool, Mutton, and Pork," of Minneapolis. It is the intention of the publishers of "Wool Markets and Sheep," to make it the representative publication of its kind in the country. Its wool market reports can be depended upon as reliable, and the most authentic published, as their representative pays a personal visit to all of the leading wool houses each week in securing the information. It's a great sheep farmer's weekly. Price, $1.00. If interested, send for free sample copy to J. Lewis Draper, Manager, 507 Rookery Building, Chicago, Ill.

Wants or Exchanges.

This department is only for your "Wants" or bona-fide "Exchanges," and such will be inserted here **at 10 cents a line** for each time, when specially ordered into this department. Exchanges for cash or for price-lists, or notices offering articles for sale, will not be inserted here—such belong in the regular advertising columns, at regular rates.

TO EXCHANGE--Buzz-Saw, Shipping-Cases, Lang. Section-Frames with tin separators, for Queens, Honey, or own offer.
22A4t G. M. DEETR, Riga, Mich.

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Wholesale and Retail.

Quality always the best. Price always lowest.

Working Wax into Foundation by the lb. **a Specialty.** I can make it an object for you in any quantity, but offer special inducements on straight 25 or 50 lb. lots. Or for making large lot of Wax into Foundation. I am furnishing large Dealers, and can also please you. **Beeswax taken at all times.** Write for Samples and Prices, to

GUS DITTMER, AUGUSTA, WIS.
Reference—Augusta Bank. 16Atf

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PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook Montgomery Co., N. Y.

Household Repairing Outfit.

This Outfit is a combination of the practical, tried and common-sense tools and materials that will enable anyone with enough ingenuity to drive a nail, to do his own half-soling, boot, shoe, rubber and harness repairing, right at home. No pegs required. Simple wire clinch nails. Saves time, trouble, expense and vexatious "shoe-maker's broken promises." Entire Outfit, neatly boxed, by express, only $2.00.

Or clubbed with the Bee Journal for 1 year—both for $2.60; or given as a Premium for sending us 6 New Subscribers to the Bee Journal at $1.00 each.

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CHICAGO, ILLS

THROAT AND LUNG DISEASES,
DR. PEIRO, Specialist
Offices: 1019, 100 State St., CHICAGO. Hours 9 to 4.
WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

YELLOW TO THE TIP—Are the Italian Queens that I can send by return mail at $1.00 each or six for $5.00. Not one in 100 will prove mismated, and any that do not produce three-banded Bees will be replaced. Tested Queens after June 15th, same price as above.

W. H. PRIDGEN,
22A5 CREEK, Warren Co., N. C.

Mention the American Bee Journal

READERS Of this Journal who write to any of our advertisers, either in ordering, or asking about the Goods offered, will please state that they saw the Advertisement in this paper.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., May 23.—The trade in comb honey is very light at this time of the year—as it is between seasons. Soon we will get the new crop, and it will come on a bare market. Just now what little comb sells brings 14c. for the best grades. Extracted, 5½@7c. All good grades of beeswax, 30c.
R. A. B. & Co.

CHICAGO, ILL., Mar. 18.—Demand is good for all grades of honey excepting dark comb. We quote: Fancy comb, 15c.; No. 1, 14c. Extracted, 5@6½c. J. A. L.

KANSAS CITY, Mo., May 20.—The demand for comb honey is light, with considerable on the market. Receipts of extracted are light—demand fair. We quote: No. 1 white comb, 1-lbs., 13@14c.; No. 2, 12@13c.; No. 1 amber, 12@13c.; No. 2, 8@10c. Extracted, 5@7c. Beeswax, 25c. C. C. C. & Co.

CINCINNATI, O., May 20.—The market is very quiet. No change since our last. We quote: Choice white comb honey, 12@16c. Extracted, 4@7c.
Beeswax is in good demand at 25@31c. for good to choice yellow. C. F. M. & S.

PHILADELPHIA, PA., May 18.—Comb honey is in poor demand. Large stores are now waiting for the new crop. Extracted is in fair demand. Beeswax has declined some, but good sales keep market from being overstocked. We quote: Comb honey, 9c. Extracted, 4½@6c. Beeswax, 29@30c. W. A. S.

NEW YORK, N. Y., May 24.—White comb honey is well cleaned up. Considerable buckwheat remains on the market, and, as the season is about over, some of it will have to be carried over. Extracted is doing fairly well, with plenty of supply to meet the demand. New southern is arriving quite freely. We quote: Extracted, white, 6@6¼c.; amber, 5@5½c. Southern, common, 45@50c. per gallon; choice, 60@65c.
While beeswax holds firm at 31@32c., we think it has reached top market and do not expect it to go higher. H. B. & S.

Convention Notices.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association, to be held in the city of Ft. Scott, on Thursday, June 6, 1895. Everybody is invited and all bee-keepers are urged to come.
Bronson, Kans. J. C. BALCH, Sec.

RUDY'S PILE SUPPOSITORY

Is guaranteed to cure Piles and Constipation, or money refunded. 50 cents per box. Send two stamps for circular and free Sample to MARTIN RUDY, Registered Pharmacist, Lancaster, Pa. NO POSTALS ANSWERED. For sale by all first-class druggists everywhere. Peter Van Schaack & Sons, Robt. Stevenson & Co., Morrison, Plummer & Co., and Lord, Owen & Co., Wholesale Agents, Chicago, Ills.
Please mention the Bee Journal. Nov15

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.
J. A. LAMON, 43 South Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.
F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 120 & 122 West Broadway.
CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.

Kansas City, Mo.
C. C. CLEMONS & Co., 423 Walnut St.

Buffalo, N. Y.
BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.
CHAS. DADANT & SON.

Philadelphia, Pa.
WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.
C. F. MUTH & SON, cor. Freeman & Central avs.

E. Kretchmer, Red Oak, —Iowa,

Sends **Free** his Catalogue of **72** illustrated pages; describes **Everything Used in the Apiary; Best Goods at Lowest Prices.** Delivered to your Railroad at either Chicago, St. Louis; Atchison, Kans.; St. Paul, Minn.; DesMoines, Iowa; Cedar Rapids, Iowa, and other places. **Capacity, 1 carload a day.**

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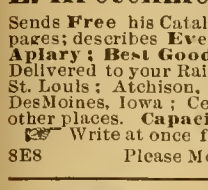

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D. T. HIVES, SECTIONS, SMOKERS SHIPPING-CASES AND COMB FOUNDATION.

Catalogue Free.

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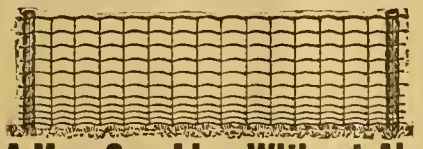

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Almost as easily as a wire fence can without **ELASTICITY.** If the man was confined in an air tight room, he would linger along for awhile, just as a fence does, supported by the trifling amount of elasticity in soft wire. Then a stimulant applied with a wrench to the end ratchets enables it to give a few more gasps before the final collapse. Our **COILED STEEL WIRE** is armed so strong with **ELASTICITY,** its life is one continual **SPRING,** and to its owner "December's as pleasant as May".

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Globe Bee Veil

By Mail for One Dollar.

Five cross-bars are rivited in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through.

It is easily put together and folds compactly in a case, 1x6x7 inches, —the whole weighing but 5 onnces. It can be worn over an ordinary hat; fits any head; does not obstruct the vision, and can be worn in bed without discomfort. It is a boon to any one whow files bother, mosquitos bite, or bees sting.

☞ This Veil we club with the Bee Journal for one year—both for $1.75; or give free as a Premium for sending us 3 New Subscribers to the Bee Journal at $1.00 each.

GEORGE W. YORK & CO.,
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IMPORTED Italian Queens reared this yr., $3.50 each. Tested Queens—**Breeders**—$1.50 to $2.00 each.

21A **W. C. Frazier. Atlantic, Iowa.**

WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

The Shallow Frames for Comb Honey—Bait Sections.

Query 973.—1. Are shallow frames superior to deep ones in the production of comb honey all through the season, or just at the beginnig of the flow? What I meau is this: It has been asserted that the honey intervening between the brood and the surplus apartments, which the bees have to cross to get above, diminishes the amount of surplus stored. Does this assertion mean that after the bees are once well started above, that this condition will still continue to exert an influence?

2. In starting the bees to work in the right place, are bait sections too fussy for financial bee-keepiug?

3. Is there any other reason than that referred to in 1 for the assertion that shallow frames are better for comb honey?—Hive-Buyer.

Chas. Dadant & Son—1. Yes. 2. No. 3. No.

Rev. Emerson T. Abbott—1. Yes. 2. Yes; no use for them, anyway. 3. Yes.

P. H. Elwood—1. Yes, after bees are bred up, shallow frames will get more box-honey. 2. No.

E. France—1. The standard Langstroth frame is good enough. 2. I would use the bait sections if they are clean.

J. M. Hambaugh—1. I think not, though each system has its advocates. 2. They are for me. 3. I don't know.

Rev. M. Mahin—1. I have used frames 9½ inches deep, and 15 inches deep, and I see no difference. 2. No. 3. No.

Prof. A. J. Cook—1. I prefer the shallow frames. 2. I think so. 3. Yes, yon can limit the space easily in the brood-chamber.

C. H. Dibbern—1. To all of the first question, yes. 2. No. 3. Yes, I think there are, but space is too limited here to give all the reasons.

Dr. J. P. H. Brown—1. A frame of the depth of the Langstroth suits my location the best. 2. It pays to get the bees into the sections as soon as possible.

B. Taylor—1. I do not like a frame more than 10 inches deep for either comb or extracted. I would prefer 8 inches for comb honey. 2. No. 3. No.

Allen Pringle—1. I think the shallow frames are superior to the deep ones in the production of comb honey from beginning to end of season. 2. Bait sections pay. 3. Yes.

R. L. Taylor—1. All through the season, yes. 2. Yes. With my bees there is no necessity for them at all. 3. Yes, a relatively larger top surface for the reception of sections.

Mrs. L. Harrison—1. I prefer shallow frames. 2. Bait sections are of value some seasons. 3. There is not so much room for storing honey above the brood, and it must go above.

Dr. C. C. Miller—1. I suspect it refers rather to the starting. 2. I produce comb honey for the money that's in it, and I think it pays me well to fuss with baits. 3. I think other claims are made.

W. G. Larrabee—I have never used frames deeper than the Langstroth, but I should think that if this assertion was true at one time it would be true at all times. 2. No. 3. I don't know.

Jas. A. Stone—1. Shallow frames are the *best only* during the whole of the working season—though not for wintering, for the reasons that it saves in the distance traveled, and they work stronger when not so high up from brood. 2. I think not. 3. I don't know any.

Eugene Secor—1. Yes, I believe so. If the frames are shallow enough, and a queen-excluder is used, about all the honey can be put in sections, but I do not advocate such practice, because (*a*) it requires feeding for winter; (*b*) too much pollen will be put in sections. 2. No.

H. D. Cutting—1. You will find many assertions are not true. You would think so if you will watch a good colony in a honey-flow and see how they manage things. 2. No, they are a help in many cases. 3. There are many reasons advanced, but no room here to give them.

G. M. Doolittle—1. Not so great as at first, still the more honey there is between the brood and the sections the slower the work in the latter. 2. They who do not use bait sections are working against their own best interests. 3. Give more surplus room immediately over the brood.

G. W. Demaree—1. "Shallow frames" is an indefinite description. We call the Langstroth frame *shallow*. My bees prefer to work above the brood. There is no "meaning" in or about the prattle about bees refusing to go above when there is nectar to be gathered. 2. Partly-filled sections are good starters. 3. "Reason" is generally left out.

J. E. Pond—1. It depends upon what depth is meant by "shallow." A single-frame Langstroth depth I consider far better than any split hive. 2. I use foundation full size in frames and sections. But I think it is altogether "too fussy." 3. Read the text-books. Opinions are many and various. The matter has been largely discussed in past years.

Wm. M. Barnum—1. There is but little truth in the assertion yon quote. But, were it true, the depth of frame would not alter conditions in that direction. Our aims should be, first, to afford the queen better accommodations in the brood-rearing business, if that be possible, and at the same time afford easy manipulation. My preference is the Langstroth (shallow) frame; but "doctors" differ. Choose yourself. 2. If the bees are tardy, use "bait." 3. Yes. They have been *tried*, and have been found a success. They are easier of manipulatiou.

COMB FOUNDATION.

Made by Improved Machinery.

Get Samples.

Here are prices by the pound—just compare.

	1 lb.	5 lbs.	10 lbs.	25 lbs.
Heavy or Medium Brood	42c.	40c.	39c.	38c.
Light "	44	42	41	40
Thin Surplus	50	47	46	45
Extra-Thin Sur.	55	52	51	50

☞ If wanted at those prices, send to

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It is always economy to buy the best, especially when the best cost no more than something not half so good. OUR FALCON SECTIONS are acknowledged to be superior to any on the market. The same is also true of our HIVES and BEE-KEEPERS' SUPPLIES, of which we make all modern styles. OUR PRICES will be found as low as those of any of our competitors, and in many cases lower, and you are always sure of getting first-class goods. We also publish THE AMERICAN BEE-KEEPER, a monthly magazine (Fifth year) at 50c. a year, invaluable to beginners. Large illustrated catalogue and price-list free. Address,

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☞ **W. M. Gerrish**, of **East Nottingham, N. H.**, is our Eastern agent. New England customers may save freight by purchasing of him.

GOLDEN QUEENS

From Texas. My Bees are bred **For Business,** as well as for **Beauty** and **Gentleness.**

☞ Safe arrival and reasonable satisfaction guaranteed. Write for Price-List.

Untested, $1.00—Tested, $1.50.

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10A26 *Mention the American Bee Journal.*

I ARISE

TO SAY to the readers of the BEE JOURNAL that

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has concluded to sell —BEES and QUEENS— in their season, during 1895, at the following prices:

One Colony of Italians on 9 Gallup frames, in light shipping-box	$7 00
Five Colonies.....	30 00
Ten Colonies.....	50 00
1 untested queen.	1 00
6 " " queens	5 50
12 " "	10 00
1 tested Queen...	$1 50
3 " Queens.	4 00
1 select tested queen	2 00
3 " " Queens	5 00
Select tested queen, previous season's rearing..	4 00
Extra Selected for breeding, THE VERY BEST..	6 00

About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.

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☞ Circular free, giving full particulars regarding the Bees and each class of Queens.

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PERFECTION Cold-Blast Smokers,

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Home of the Honey-Bee

Where you can buy **Queens,** as good as the best—Warranted Purely Mated, and guaranteed free from Paralysis. From either an Imported or a Straght 5-B. or Golden Mother—75 cents each; 12 for $7.50. Tested, $1.00 each; 12 for $9.00. After June 1st, 50 cents each; 12 for $4.00; Tested, 75 cents each, 12, $7.50.

Good Breeders, $2.00 each; Straight 5-B. or "Faultless" Queens, $2.50 each. **Bees,** 75c. per lb. Circular Free. Address,

HUFSTEDLER BROS.

10A26 CLARKSVILLE, TEX.

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☞ "I received the hives all right. I am well pleased with them. I believe it to be the best hive made. I had no trouble in putting them together; all fit nicely. I did not use a square.....I am glad that you advised me to get this hive."

—Hannibal, Mo., May 13, 1895.

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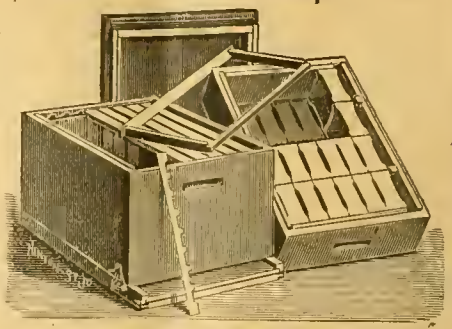
Emerson T. Abbott,

ST. JOSEPH, MO.

Latest—Simplest—Cheapest—Best



The "St. Joe" Hive.

TESTED QUEENS

Are usually sold for $2.00. I will explain why I wish to sell a few at less than that. As most of my readers know, I re-queen my apiary each spring with young queens from the South. This is done to do away with swarming. If done early enough it is usually successful. It will be seen that the queens displaced by these young queens are never more than a year old; in fact, they are Fine, Tested Italian Queens, RIGHT IN THEIR PRIME; yet, in order that they may move off quickly, and thus make room for the untested queens, they will be sold for only **ONE DOLLAR.** Or I will send the REVIEW for 1895 and one of these Queens for only $1.75. For $2.00 I will send the REVIEW, the Queen and the book "Advanced Bee-Culture." If any prefer the young, laying queens from the South, they can have them instead of the tested queens, at the same price. A discount on large orders for untested queens. Say how many are wanted, and a price will be made. Orders can be filled as soon as it is warm enough to handle bees and ship queens with safety. Samples of REVIEW free.

Please mention this Journal. **W. Z. HUTCHINSON, Flint, Mich.**

Seventeen Years Ago ✻✻✻✻✻✻ ✻✻✻✻✻✻ Dadant's Foundation

Was first offered for sale. The following parties keep it in stock and have kept it for years for sale. Why? Because they want to handle only the best goods, and they say they get the best goods when they buy Dadant's Foundation.

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Is not such a steady trade a proof of real merit in the goods we sell? We also make a specialty of **Veils and Veil Stuffs** of best quality.

Beeswax Wanted at All Times.

Bee-keepers' Supplies, Smokers, Sections, Tin Pails, etc. **Samples of Foundation and Tulle FREE** with circular. Instructions to beginners with circular. Send us your address.

CHAS. DADANT & SON,

Mention the American Bee Journal. **HAMILTON, Hancock Co., ILL.**

Notice !

We beg to announce that we have completed arrangements with the Porters whereby we secure for this country the control of the sale of that very excellent and almost indispensable implement—

THE PORTER BEE-ESCAPE.

It will be manufactured by the Porters, as formerly, but write to us for prices in both large and small quantities.

The A. I. Root Co., Medina, Ohio.

PUBLISHED EVERY WEEK AT $1.00 PER ANNUM.

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AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS

35th Year. CHICAGO, ILL., JUNE 6, 1895. No. 23.

Contributed Articles.

On Important Apiarian Subjects.

No. 6.—The Harvesting of Extracted Honey.

BY CHAS. DADANT.

In running an apiary for extracted honey, there is but little outlay of expense, and that is one reason why it may be produced much cheaper than comb honey. Yet, to succeed well, a few implements are necessary. First, an extractor of good quality is needed. We have generally been using the Excelsior, but any good make is satisfactory. We would, however, recommend a 4-frame extractor with stationary basket in preference to a reversible basket. The 4-frame extractor does not occupy any more room than the 2-frame reversible, and if the cage is so arranged that the frames may be inverted without raising them out, the work proceeds faster. We use a 4-frame extractor, the basket of which is 13 inches wide, so that two half-frames 6 inches deep can be placed side by side on each face of the basket. This gives us room for 8 half-depth frames.

The capping-can is also, to us, an indispensable implement. Nothing can well take its place, for the cappings, the pieces of broken combs, must be placed at once where the honey may readily drain out of them, and nothing answers the purpose but the capping-can. This is one of the very few original useful articles to which we lay claim as inventors—*no patent*, however. The capping-can is composed of two cans fitting into each other, the upper one having a wire-cloth bottom, so that the honey drains out of it into the lower reservoir.

In a good season, it is well to have also two or three, or even four, strong tin pans made large enough to receive the supers. These pans are only 1½ inches deep, and are intended to catch the drippings, if there is any, that may fall from the combs of honey while they are taken out and hand-

"Rose Hill Apiary," at Belleville, Ill., Mr. E. T. Flanagan, Proprietor.—See page 364.

led. Two or three robber-cloths (such as Dr. Miller describes in his "Year Among the Bees") made from coarse gunny-sacks, or any sort of coarse cloth with a stick or slat nailed at each end, and which are used to keep the honey-supers out of reach of robbers. A Bingham honey-knife, a smoker, a half dozen home-made brushes of asparagus tops or soft grass, I believe, will complete the outfit.

Let me here remark that a brush made of feathers, woolen goods, or other animal material, will not serve the purpose as well as a vegetable brush, as the bees evidently recognize the difference, for they are not prone to get angry from being rudely treated with a vegetable brush—probably owing to the fact that they are accustomed to hunting for a living among the grasses and the stems of plants, while all connections with animals are to them of a disagreeable nature.

But what need have we of brushes? Have we not the bee-escape? We have had this implement for so short a time that we are not yet fully aware of its usefulness. I must say that for our part we were very slow in adopting it, and that we considered it at first as one of the many catch-pennies with which so many beginners are enticed into spending their money. The bee-escape, however, proved to be more than we had anticipated, and we now have some 200 of them in use. But, in some cases, the bees do not all abandon the supers, and a brush is always useful.

We do not usually extract any honey until the crop is at an end. About a week after the cessation of the honey-flow is a good time to begin. On the evening previous to the extraction, we put on the bee-escapes. We use the Porter, which has so far with us proven very good. These escapes are fitted into a tight honey-board with a bee-space both above and below, and this is put on by gently smoking the bees, lifting the supers and placing the escape-board between this super and the brood-chamber. The next morning there are but few bees left in any of the boxes. We have seen a few instances when there were no bees left, but this is the exception.

There are two or three advantages in putting on a bee-escape. First, you get rid of the greater part of the bees. Then, if there are any brace-combs, or burr-combs, between the super and the brood-apartment, these are all broken, and the bees clean them of whatever leaking honey there may be, quietly and without danger of robbing. There is also a great advantage in not disturbing the colony, since all, or nearly all, the bees have left the super of their own accord.

As fast as the supers are removed from the hive, they are placed in one of the tin pans, and each comb removed in turn and transferred to another super, so as to get rid of all the bees that may remain. The supers are then carried, or wheeled, to the honey-room. We use a light wheelbarrow with springs, for which we think we must give credit to Mr. Root. This is a great labor-saving implement when one has to remove some 1,500 to 1,800 pounds of honey in a day.

If there is no honey in the fields, the work must be done very carefully, avoiding to leave any of the combs exposed to the reach of robber-bees at any time, and the robber-cloths are very useful to keep the supers thoroughly covered while they are handled and transported to the honey-room.

In the honey-room it takes a man with nimble fingers and a dextrous hand to uncap all the honey that two persons can bring him from a well-stocked apiary; but if he has a quick, watchful assistant, he may be able to uncap combs enough to run out some 1,500 pounds of honey in an ordinary day. There are many combs which are not sealed at all, unless the season has been a very prosperous one, and these are soon disposed of. The combs are then fitted back in the supers, to be returned to the bees in the evening, unless the crop of honey is still continuing, when they may be returned to the hives as fast as extracted. But if the returning of the supers, sticky with honey, causes any uproar in the hive, it is much safer to keep all until evening in the honey-room, when, with the help of everybody, the supers may be put back in a very short time, and the bees have all night before them to cleanse them and put them in such shape as to be able to defend them against intruders.

We always return the supers to the hives, even if there is no probability of their being again filled that season, because they are in better shape to be preserved through the winter. The combs out of which honey has just been extracted are always more or less dripping with honey, and even if they were only sticky with the sweet nectar they would be apt to attract insects, mice, or to sour, for honey has a strong hygrometric properties, and attracts moisture much as salt does; so that, in damp weather, its volume increases when it is exposed to the air, and combs, which were only "sticky" when the weather was dry, become actually "leaky" in damp weather.

The receptacle in which you place your honey must depend to some extent upon the shape in which you expect to market it. If one could tell just in what shape the honey would be sold, it would be best to put it up in that shape at once. But as the retailer may want it in all sizes of packages, from a 60-pound can down to a one-pound bottle, it is generally best to put it up first in large receptacles.

The shape of honey-packages, and the care to be given the honey, also the rendering of the cappings, with a consideration of the different grades of honey, will be treated in a subsequent article. Should some points lack in clearness in the methods heretofore given, I shall gladly reply to any queries that may be made.

Hamilton, Ill.

Dequeening—How One Bee-Keeper Does It.

BY C. H. CHAPMAN.

'Tis with a sense of mingled "regret, remorse and shame" that I think of my supposed-to-have-been-brief report for 1894, on page 78, as I supposed that all bee-keepers knew full as much, or more, of dequeening than I, and surely more of rearing queens. I have waited long and anxiously for some person of ability to take the matter up and give an article on dequeening, but "how vain a thing is hope!"

First, I will say that this mode of management is not my own, but just how or where I caught the idea, or to whom the credit is due, I am unable to say, but I think it is due to Mr. P. H. Elwood, of New York.

To prevent an undesirable amount of increase, requiring extra outlay of capital and labor; to increase the income from what I already have, by keeping my hives, during the short honey harvest allotted me, crowded to the uttermost with bees, I resort to dequeening nearly all colonies.

On page 168, Mr. W. W. McNeal wishes to know "about how many colonies figured in the experiment." Ninety colonies were dequeened, 10 worked by division, and 12 by natural swarming. I have worked thus for three or four seasons.

On page 296, F. L. Thompson gives in brief Mr. Aikin's method of dequeening, in which I think he is somewhat mistaken in the way Mr. Aikin secures his young queens, for such queens would be poor indeed. I wish Mr. Aikin would give us an article on this theme.

Now to the work: Get all colonies as strong as possible; see that all the queens have one wing clipped; have a goodly number of queen-cages in readiness; allow the swarm to issue the same as in natural swarming, cage the queen, remove *every* queen-cell, let the swarm return, take the very best possible care of the queen, and in seven or eight days again remove *every* queen-cell, and leave your bees *hopelessly* queenless for four or five days. This is the key to use every time, for if the queen is returned when the last batch of cells is removed, swarming will be pretty sure to follow in a few days. Hopeless queenlessness seems to cure the swarming-fever. Is it not all plain and simple?

For cages, take old sections, cut a thin board, bore a ¾-inch hole through it, cover with a button, tack it in one side of the section; cut wire-cloth 5x6 inches, bend down over the other side, and your cage is done. Now with a small funnel, waxed and sanded inside, you can run in bees at a rapid rate by shaking a lot of bees off a comb on the ground. Set the funnel over them, and through the hole in back of the cage run in 50 or so of bees with the queen; turn the wire-cover side down, invert and insert a vial of honey fixed so the bees can suck the food, remove to some cool room, and your queen is always ready.

Now for the queens: Select such colonies as you wish to rear queens from, and mark them (any way you please). When the swarm issues, let the bees return, *leaving all the queen-cells;* at your leisure examine to ascertain how many good, large queen-cells you have, form your nuclei, give each a cell, and you will have queens as good as the best. Never give a dequeened colony anything but a good laying queen.

To me it is necessary to have all hives numbered, so that a simple, accurate account of everything may be kept. Then with a piece of clean section and pencil ever ready, nothing is left to memory. Perhaps it is well to return the queen to her own, as then she will be less likely to be for an undue time removed and perish. If you have young laying queens use them in place of any queens that do not please you. To return your queens, simply smoke them in at the entrance.

If all is not plain, please say whereing it lies, and I will try again. Soliciting friendly criticisms, I close.

Cohoctah, Mich.

[Perhaps Mr. Aikin will describe his method of dequeening, for the benefit of the readers of the American Bee Journal.—EDITOR.]

What Dr. Miller Thinks.

FOUL BROOD IN HONEY.—It seems to me Wm. McEvoy might have confined his whole article to the one statement on page 326, that Dr. Howard received honey from foul-broody colonies "and then with a microscope examined the honey and found the living germs of foul-brood in it." Not that the rest is not interesting reading, but the only way to get away from the belief that foul brood can be carried by robbers is to say that Dr. Howard was mistaken and didn't find foul-brood germs in the honey. That one fact, if left undisputed, cannot be smothered with bushels of theory.

PLANTING FOR HONEY.—Mr. W. H. Morse's encouraging words with regard to planting for honey suggests the thought that bee-keepers can often get their neighbors to do the planting. Although planting linden trees may not bring any immediate return in honey, yet when shade trees are to be planted it will be a good deal better for the bees if such trees are planted as will produce honey. Where lindens are not already plenty, it is plainly a gain to have a single tree planted within a mile or two. So if it will pay me to plant trees on my own land, it surely ought to pay to plant them on my neighbor's land, for in that case I get my rent free. If I can get him to plant trees that I furnish him free, so much the better.

HONEY-LOCUST.—Dr. Brown, on page 330, places honey-locust at the head of the list of mellifluous trees cultivated for ornamental purposes. Does that mean it's better than linden? Possibly the Doctor thinks linden is not among the trees planted for ornamental purposes, but I'm sure it is in some places, and it's among the finest.

CUTTING OUT QUEEN-CELLS.—A plan is given at the bottom of page 330, by Dr. Brown, to prevent second swarms, but there's one trouble about it, as he mentions above, that it's a difficut thing always to be sure of getting *every* cell. Bees are smarter than bee-keepers, and when they undertake to cut out queen-cells they don't miss any. So you can manage to get them to cut out the cells without missing, and with much less time on the bee-keeper's part. When the prime swarm issues, put it on the old stand, setting the mother colony close beside it. In five to seven days remove the mother colony to a new location, and the field-bees will desert it and join the swarm. The depletion and the fact that no honey is coming in discourages any idea of further swarming, and all cells are destroyed after the young queen emerges, or if any are left they are destroyed after emerging.

TEMPERATURE OF CELLAR.—On page 337, O. E. Douglass tells about his bees going safely through the winter in a cellar with a constant temperature of 58°. According to the general teaching those bees ought to have gone to brood-rearing and then come out in bad shape in the spring. But is that teaching always correct? Bees stand for weeks in the fall with the temperature above 50°, and have no thought of brood-rearing if no honey is to be had. The excellent ventilation no doubt played an important part in Mr. Douglass' case, and I suspect that the trouble of Mark D. Judkins (same page) may possibly have been want of proper ventilation of the cellar.

DOUBLE VS. SINGLE BROOD-CHAMBER.—Query 972, on page 339, shows diversity of opinion. There seem a majority who believe more brood will be reared if all the room is on one floor. Very few, however, seem to know anything about it, merely giving their guess in the case, and some frankly say they don't know. Doolittle bases his answer on his experience, and so does Secor—but they reach opposite conclusions. I wish Doolittle, Secor, and others, would give us particulars as to their observations.

ABOUT SWARMING.—On page 311, Adrian Getaz hints a desire to have me tell what I don't know about swarming. It would take more than one number of the "Old Reliable" to contain it all, for I have a mass of ignorance on that topic that has been accumulating for years. Just when I'd think I'd found out some one thing about it, the troublesome bees would cut up some caper that would knock my notions all endwise.

Friend Getaz remarks: "The Dadants say emphatically that the chief cause of swarming is the lack of room for the queen to deposit her eggs, or for the bees to store their honey." My own experience disproves that. I've had bees take it into their heads to swarm when they had 16 frames, not crowded in any way. And not so very few cases, either. May 23, this year, in spite of the preceding 10 days of such cold weather, I found a colony with a number of queen-cells, having two stories of eight frames each. I think those cells meant swarming. I have entire confidence in the assertion of the Dadants, that they have so little swarming with their large hives, but with just as much room in my hives why should the result be different? Is it because my bees have two stories instead of one? But the queen seems to go back and forth from one story to the other, and the colony I just spoke of had brood in 11 frames. I don't seem to know much about it.

The opinion that Friend Getaz expresses, that the presence of the queen-cell is the true cause of swarming, seems to be substantiated by the experience some one gave, that inserting a sealed queen-cell caused swarming. And yet I had one colony that after being balked several times, swarmed out with only one cell of brood in the hive, and that only an egg. Even supposing the queen-cell is the miscreant that causes so much trouble, the question still remains—what causes the construction of queen-cells? I don't know.

I think Friend Getaz is right in thinking the queen doesn't lead or start the swarm. I had a swarm issue from a hive from which I had removed the queen perhaps an hour previously.

If any one knows exactly what it is that makes bees swarm, let him please rise and tell. I don't know.

Marengo, Ill.

More "Talking Back"—Hives, Frames, Etc.

BY F. L. THOMPSON.

On page 237, Gleaner fishes for comments, by those who want 10 or 12 frames an eighth larger in size, on the statement that six 16x9 frames with a good queen will be found all that is required to keep a hive well stocked with bees.

In the first place, "frames an *eighth* larger" is something new. I thought it was a fourth. Then, the statement may be admitted without invalidating any claims. The word "hive," and the phrases "good queen" and "well stocked" are so elastic, don't you know?

But without any quibbles, just look this supposition squarely in the face: If nobody had ever used a capacity of more than *four* frames, if none of us had experience with anything else to look back on, do you suppose that if the capacity question was brought up, that the vast majority would find anything out of the way with the accommodations for their bees? Fun was poked at Dr. Miller because he said that if small brood-nests were the thing, and eight frames were good, six, according to that reasoning, ought to be better yet. But I believe that his implication (that such reasoning is fallacious) was about right.

Mrs. Heater said, in reply to Query 950, "Look at a strong colony clustered on the ordinary frame, and you will see by the shape and size of the cluster, that it is very well adapted to their needs;" and Mr. Demaree said, "Time and use have proven that the Langstroth frame is not too shallow to hurt." I really don't know any reason why I shouldn't look at a strong nucleus, then, on little frames made out of sections, and say that the shape and size of the cluster show that such a frame is very well adapted to their needs; or why it should not be said that time and use has proven that the Bingham frame is not too shallow to hurt.

The truth is, bees will look just as contented and happy on one kind of frame, or in one size of hive, as another; they will have brood, and surplus honey, and drones, etc. Most writers on the subject have been delightfully consistent in evading the real point of the discussion, to-wit, that under ordinary circumstances, in large hives, the average colony attains a certain degree of development; that it takes more than one year (not merely one spring's growth) for it to become thoroughly established in this development, which does not depend upon the average queen more than it does on the bees; that the question at issue is, whether it pays better to cut down the bees every year (*i. e.*, use a small chamber) and let them climb up *part* way again, like a tree that is pruned (and keep a greater number of colonies to make up the difference), or let them attain their development unchecked, trusting to the reserve power accumulated to retain it.

It should be distinctly understood that the small brood-chamber is abnormal for an established colony which does not swarm—not perhaps the first year, or even the second—but in the long run. When that is admitted, there is still plenty to be said on both sides. So I haven't the least doubt that those Australian bee-keepers find six frames enough to keep their hives what they call "well stocked."

One thing is certain, the small bee-keeper has been left out of the discussion entirely. To him, a colony is a colony, not a varying fraction of his bees; a hive is a hive, and a queen is a queen. He will get more honey, after the first few years, from 10 large hives than from 10 small ones, and if he ever finds that out, he will not be likely to keep 15 small ones instead.

If a single colony in a large hive, after developing in proportion to the size of the hive, gathers 75 pounds of surplus when it would have gathered 50 pounds if its development had been kept down by a small hive, then 100 such colonies would suffice for a location which would require 150 colonies in small hives to "lick it up." Isn't that just as fair a statement as to say, "Why not keep 150 colonies in small hives as well as 100 in large ones?" It is a poor rule that won't work both ways. Or, if a colony in a large hive requires to be fed 60 pounds during the year, it would not require more than 40 pounds if its development had been kept down by a small hive; but the number of colonies in large hives sufficient to stock a location would collectively use up no more sugar than the number of small colonies requisite for the same purpose.

Mr. Davenport, on page 231, argues the matter as if the man who preferred large to small hives would necessarily keep the same number of colonies in both cases; but if his arguments are scrutinized closely, they will be found to contribute but little to the small hive side of the question, but rather to the proposition, "It is six of the one, and a half-dozen of the other." The only statement he makes which seems to give a positive advantage to the small hives is, "With big hives, where no feeding is done, the season is often an entire failure." But it is not unlikely that a considerable percentage (enough to account for the word "often") of the big hives referred to contained colonies in the first or second year of their existence, which were further embarrassed by being in an apiary of just as many colonies as would be needed for the locality if they were all in small hives.

Certainly, it is hard to imagine why a fixed proportion of bees to hive capacity, and never a total too great for the locality, should not produce the same results when the total working force is the same. In fact, *if* the proportion was invariably maintained, the presumption would be in favor of larger and fewer colonies, for comb honey at least.

Mr. Hutchinson makes, or rather hints at, the same point in the April Review, by saying: "If a man having an apiary of 10-frame hives should change them for 8-frame hives he would thereby increase the egg-producing factor (the queens) one-fourth, and the probabilities are that instead of having less bees, there would be an actual gain." To increase the egg-producing factor one-fourth, while maintaining in theory the same number of eggs, is of course neither a loss nor a gain (if queens, and extra hives and labor, are supposed to cost nothing). Why should there be an actual gain in practice? is the question. Apparently because the proportion of bees to hive capacity is *not* as invariably upheld in large hives as in small ones. May not this be due to the large portion of partially-developed colonies, when swarming is allowed? I wonder if we have not been at fault in including the records of swarms of the previous year, in getting at the capacity of that "average Italian queen" before the flow.

And right there is where Dr. Miller's point comes in again. If the queen in an 8-frame hive comes nearer to filling up the 8 frames with brood than she would 10 frames, the probabilities are that she would crowd 6 frames still closer; and, if we only leave out the one item of warmth, she might run 4 frames a little closer yet. Very well, then; from that point of view, perhaps Scylla and Charybdis are wider apart than we thought—perhaps arrested development, combined with a too flat chamber, was what made the just medium halt at 8 frames—if the 6-frame is not Scylla, perhaps the 10-frame is not Charybdis—and one more reason for doing away with swarming.

In other words, the next thing in order is contributions detailing observed facts relating to the maintenance or non-maintenance of the proper proportion of population of established colonies in big hives; and, as there is a scarcity of data on that point (so few really large hives in the country), perhaps it would be well to not regard the small-hive testimony as overwhelming just yet. To put it still more concretely, is there a larger percentage of colonies which, after living in big hives three or four years, only about two-thirds fill the hive with bees, than there is of such colonies in small hives?

If disputants would fight it out on that line (with due regard for locality), instead of wasting powder on questions like, "Are eight Langstroth frames enough for the average queen?" it would be more to the purpose. Much depends upon the statement of issues. Experience is useless unless rightly interpreted.

Is it an Objection?—On page 239, Mr. W. C. Frazier says the most serious objection to the 11¼-inch depth for a comb is that it breaks and melts down easily. *How* serious the objection is he does not say. But it may be doubted whether "serious" properly describes the objection, when the Dadant frame is in common use in Italy (a warm country), France, and Switzerland, often unwired, and we hear nothing of complaints on that score.

The Ends of the Frames.—On page 101, Mr. Abbott says: "The place for the ends of the frames is inside the box that forms the brood-chamber." As there is a hive with projecting frame-ends on the market, to which not one of the objections applies which he gives, it would seem that that statement ought not to be made a general one.

Patent Hives.—Just at the close of the moth-trap era, and other contrivances alluded to by Quinby in his book, it might have been "pretty generally understood that *all* patent hives are humbugs" (see page 151). But the world has moved since then.

Colorado Winters.—Mr. Abbott is quite right in doubting the "mildness" of Colorado winters, on page 90. The word "mild" requires too much careful explanation after people get here.

Colorado Alfalfa Region.—On page 183, "the alfalfa regions of Colorado" as a place to produce honey should not be understood to mean about Denver, or anywhere where there are plenty of bee-keepers already. There is considerable complaint of overstocking.

The Divisible Brood-Chamber.—On page 229, if it had been shown that no more brood is produced in the divisible brood-chamber hive than in others of the same depth; and that it does no particular good to eliminate the strip of honey intervening between brood and sections; and that other hives can be handled with no more work, this hive would have been killed a good deal "deader." Arvada, Colo.

Results of Experiments in Wintering Bees.

BY HON. R. L. TAYLOR.

The last mentioned experiment is of more than ordinary interest and importance on account of the fact that the ablest and most experienced bee-keepers are divided in their opinions as to the chief cause of the dysenteric ailment brought on during confinement in winter; one party attributing it to improper food, and another to super-abundant moisture. The colonies selected for the experiment were taken indifferently from the apiary and did not differ greatly from the others either in quality of their stores, or in their numerical strength, except that it would have been difficult to have found another colony in the apiary as weak as No. 1, unless it might be among the four or five abnormal colonies.

I have already alluded to the use of a hygrometer in the bee-cellar during the winter to determine the degree of moisture in the air, and it should be said in addition that it showed almost uniformly a difference of one-half a degree between the dry-bulb and the wet-bulb at a temperature of 43° to 45° (which was generally that of the cellar), indicating that the percentage of saturation was about 96, lacking only about 4 per cent. of complete saturation.

In the case of the colonies under consideration no effort was made to determine the degree of saturation of the air immediately surrounding them by the use of an instrument, the advisability of that course not having been suggested early enough to allow suitable arrangements to be made for that purpose, but all the indications were that the saturation of the air was complete.

The cover used for the top hive was a flat board several inches wider and longer than the hives, purposely chosen of that size that it might serve to hold the wet sheet free from the hives. It was raised a little from the hive by the insertion of thin strips, and it was found on the removal of the sheet on April 8, to be loaded as heavily as possible on its under side with great drops of water which fairly poured off when one edge of the cover was raised a little.

The covers of No. 3 and No. 5, which were also raised

from the hives to give upward ventilation, were in like manner loaded with water, to an equal extent, indeed, with those of Nos. 2 and 4 which covered their hives tightly so as to prevent all upward ventilation. The upper surface of the cover to No. 5 was partly covered with a jelly-like substance having the appearance of the "mother" of vinegar. The inside of the hives were very damp, and in places so wet that water trickled down. The combs were damp, and to a considerable extent moldy outside of the cluster. These hives were all the "New Heddon," of two sections each.

It is necessary here to explain that the bees in the cellar referred to have wintered exceptionally well. Out of a little less than 150 colonies, the loss has been only five, and the loss of these is explained by queenlessness undiscovered in the fall, or by other abnormality of condition, so that it may be affirmed that they wintered almost perfectly, as almost all rate from strong to very strong in numbers, and as to health they are in excellent condition almost without exception, and yet the hives of a large portion of them—I estimate from one-third to one-half—show more or less of what might be taken to be the characteristic marks of dysentery, but these are always the outside the cluster, and generally outside the hive.

It may be that this is an indication of incipient dysentery, or diarrhea, as it is perhaps more generally called. But I think it will not be questioned that it is the *retention* of the feces that causes the disease whose effects are to be dreaded, so I prefer to think that when the temperature is such that the bees willingly go outside the hive to respond to the call of nature, they thereby escape even the incipient stages of the dreaded disease even though the other conditions are such that they cannot safely take wing. In other words, flight is not necessarily essential to a sanitary condition. Every observant bee-keeper of experience has noticed, when the sun suddenly breaks out about the first of June, after a storm that has kept the bees confined two or three days, and the bees rush out, how they may be seen on all sides sitting on the leaves of the shrubs and bushes, at the same time voiding their feces. But this has never been taken for signs of disease.

This, however, is not the real question at issue, but what I have said, taken with what is to appear further on, will enable the reader to form a judgment as to how the five colonies in question wintered in comparison with those deprived of the luxury of a wet-sheet envelope. The real question is whether the necessity for the voiding of the feces is caused by the high percentage of moisture in the atmosphere, or by something else. Although in the present case it is claimed there was only little if any of the disease known as dysentery present, still it may be granted that had the conditions been such that the bees would have felt compelled to retain their feces indefinitely, the disease would doubtless have been induced thereby.

It will be found difficult, if not impossible, I think, to find any indication that the conditions within the wet sheet were more favorable to the development of the disease than those outside of it. However, since the relative humidity of the air outside is so high that it may with much show of reason be claimed that the total possible difference between that outside and that inside the sheet is not sufficient to warrant an expectation of any great difference in results. To meet such a case it may be of use to compare the results of the past winter with those reached in wintering bees in the same cellar during other years.

It can hardly be said that the relative humidity of the air in a given cellar kept under like conditions is a very variable quality, taking one year with another, and certainly the humidity of the air in the cellar in question could hardly have been greater during the past winter than during previous winters, for not within the memory of the living has the ground in this part of Michigan been so dry during the winter season as it has during the past winter; nevertheless, never during the eight seasons which have seen this cellar in use, have the evidences of the approach of the danger of undue accumulation of feces been more *generally* seen, although in two or three years many times the damage was done, for though the cases were comparatively few, the real disease had been induced by undue retention. As the result of another winter's campaign, out of almost 200 colonies, at most but one colony showed any sign of the trouble. This question suggests itself: Which is the more likely, that the humidity of the air in the cellar, or the quality of the stores possessed by the bees, varied from one year to another?

I now give a detailed statement of the condition of the five colonies in tabulated form, upon their removal from the cellar on April 8, together with the weight of each when placed in the cellar on Nov. 22:

Designation of Colony.	Weight Fall, lbs.	Weight Spring, lbs.	Stores consm'd from Nov. 22 to Apr. 8, lbs	Signs of Excrement	Signs of Mould.	Spaces occupied by bees.	Standing as to Strength	Upward Ventilation.
No. 1	43¾	37¾	5¾	little	some	3	3	Yes
No. 2	45¾	38	7¾	none	some	5	6	No
No. 3	48½	39	9½	none	little	6	6	Yes
No. 4	54½	45½	9	some	much	7	7	No.
No. 5	59½	44½	15	much	very much	6	7	Yes

Little requires to be said here by way of explanation, and I need only state that the bees of No. 5 voided much excrement on the front of their hive when removed from the cellar, which the others did not do; and that while I give in one column the number of comb-spaces occupied by the bees as an indication of strength, I have added another to rectify the other to some extent based on 1 to 10—1 meaning weakest, 5 what would be deemed of average strength, and 10 the strongest.—Bee-Keepers' Review.

Lapeer, Mich., April 19, 1895.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Hiving Swarms.—"Dr. Dubini not only makes a practice of hiving the swarm on the old stand, and removing the old colony to a new one, but also sets the old colony on the stand of another strong colony which has not swarmed, removing the latter."—Notes from Foreign Journals, in Review.

This mode of procedure is a little peculiar, and somewhat out of the regular order. I wish Mr. Thompson would give us the Doctor's reason for the last move, if he can do so. I always move the old colony to a new stand, but do not understand exactly why it is placed on the stand of a strong colony and this removed. Will this not cause the old colony to send out another swarm as soon as a queen is hatched out? or does the Doctor cut out all of the cells and introduce a laying queen at once, and thus have two colonies instead of one working with all the vigor and seeming enthusiasm of a new swarm?

How is This for Candy?—"A correspondent winters his bees successfully by kneading four parts of powdered sugar with one of warm honey, spreading with a rolling-pin, and placing the cake on the frames over the cluster."—Quotation from a French Journal.

Michigan, and the people who live in climates where a sugar cake will never do, will please take notice. The only fears I would have about this mixture is that it would prove too "soft." If it does not, it will fill the bill of "*plenty of food of the right kind in the right place.*"

Honey as a Preventive of Diphtheria.—"Dr. W. L. Smith, of Glanford, Ont., writes to say that he has observed that where honey has been freely used as an article of diet, cases of diphtheria have not been met with."—King's Medical Prescriptions.

I do not want to steal Dr. Peiro's thunder, but will add that a little powdered sulphur mixed with extracted honey until it forms a thick paste, and taken in teaspoon doses, will be found good for a great many of the ailments of children. Keep them out of the rain and damp while they are taking the mixture.

Another Cure for Stings.—"A man was stung above the eye and the part was badly swollen. A lotion of potassium permanganate (6 grains to 1 ounce of water) was applied; in five minutes the pain ceased, and in six hours the swelling had subsided."—Dr. Hobbs, as quoted by Druggists' Circular.

This note speaks for itself, and needs no comment. I have not tried it, as I seldom pay any attention to a sting beyond the immediate removal of the stinger by a scraping movement of the finger-nail.

Number of Plants.—"Professor Saccardo calculates the number of species of plants at present known as 173,706, distributed as follows: Flowering plants, 105,231; ferns, 2,819; other vascular cryptogams, 565; mosses, 4,609; hepaticæ, 3,041; lichens, 5,600; fungi, 39,603;

algæ, 12,178. Professor Saccardo thinks that the total number of existing species of fungi may amount to 250,000, and of all other plants to 135,000."—Druggists' Circular.

What a field for study is here presented! Who can tell how many out of the 105,231 flowering plants secrete nectar or furnish an abundance of pollen for the bees? It would also be interesting to know just what proportion of them depend upon some kind of insects for perfect pollination.

Canadian Beedom.

Conducted by "BEE-MASTER."

New Breeds of Bees.

The earth has been ransacked from pole to pole for new races of bees, but it is extremely doubtful if any improvement will be made on the varieties we now have, except by judicious breeding and crossing. Perhaps it may be possible to fix a strain that will combine the best qualities of all known varieties, and it is in that direction the efforts of queen-breeders should lead. It may be with bees as with cattle, and a certain standard of excellence when it is reached may prove to be the highest that can be attained. Absolute perfection cannot be looked for in this world. The most we can hope to do is to approximate the desired, but after all, inaccessible goal.

The Eight-Frame Hive.

There has been, as we all know, a well nigh interminable discussion in regard to the respective merits of large and small hives, but for a convincing plea in favor of the 8-frame hive, commend me to Mr. C. Davenport's article in Gleanings for May 15, with all of which I thoroughly agree, except the preference expressed for the Hoffman frame, the objection to which seems to me to be, the awkwardness of having to use a follower. But this awkwardness may be owing to my stupidity. I think Editor York would do his readers a good turn by scissorizing so much of that article as relates to the 8-frame hive.

[I will try to give soon the portion of Mr. Davenport's article referred to by Bee-Master.—EDITOR.]

An Unwelcome California Echo.

Among California echoes by Rambler in Gleanings of May 15 is this one:

"Messrs. Gemmill and Alpaugh, of Canada, made a host of friends while here. We should like to annex them to California. It would lengthen their days of usefulness, and give us two more live bee-keepers."

Rambler, "Thou shalt not covet." These men are two of the best bee-keepers in Canadian beedom. We can't spare them. They can live just as long here in Canada, if they do not work too hard, and if each of them will persist in doing the work of two men, they won't be long-lived even in the angelic climate of California. Can't you *make* some more live bee-keepers for yourselves, without coaxing away any of the comparatively few we have over here? If you get Gemmill away from us, alas for the prospect of our having any more "honey-bee concerts." If we should ever have another, after losing him, the old Scotch song—"Will ye no' come back again?"—would be in order, and every bee-keeper would join in the refrain.

How One Colony Acted.

I think I narrowly escaped having the earliest swarm in all my experience as a bee-keeper. For two or three days prior to the cold snap which befell us May 11 and 12, a very populous colony began to hang out in clusters, causing me to say to myself, "Those bees are getting ready to swarm." The drop in the mercury from 90° to 24° drove them all in-doors, and the continuous cold must have made them form the winter cluster over again, for hardly a bee showed face at the threshold for more than a week.

The first really warm day was May 22. Partly out of curiosity, and partly to ensure myself against all risk of their swarming in my absence, I gave the colony a thorough examination. It was crowded, I had almost said, to suffocation. Preparations had been made for swarming, but the cold snap had caused the idea to be abandoned. Several queen-cells of recent construction were to be seen, but they had been cut down, and not one had a living occupant. A recurrence of the intense heat would cause the bees to swarm in the absence of all preparations. I knew this quite well from past experience. The honey harvest was more than ever in the distance through the nipping of the fruit-blossoms. I could not relieve the crowding by putting on sections, and yet I did not want to weaken the colony, for here was a force of workers just ready to make things hum as soon as there was a honey-flow. So I took out one frame of pretty well advanced brood, and gave it to a much weaker colony, putting in place of the removed frame of brood, a frame of brood-foundation. I wonder if this was the best thing to do under the circumstances. It seems to me this is a case worthy of being discussed by some of our experts. If that swarm had issued the last day of the hot spell, it must have been fed or it would have starved, for I have said, there was no flying for more than a week, and if there had been there was no honey to gather.

I calculate that as soon as settled warm weather comes again—if it ever does!—those bees will prepare to swarm, and when the queen-cells approach the stage of ripeness, I shall divide the colony. Now here is a case in which prevention of swarming is only possible by removing part of the bees. It is plain as daylight to me that you cannot make hard and fast rules, or get up an automatic apiary that will run itself in the matter of swarming, without a presiding human mind to regulate things.

I have made a prediction as to what will happen if warm weather ever comes again. This is May 27, and not a bee pokes its nose outside the hive! So one can hardly help querying whether warm weather will ever come back to us. It seems pretty certain that if the present season's character continues to be one of extremes as it has been thus far, it will develop some new conditions which will necessitate a revisal of our theories about swarming, and possibly other things in practical bee-keeping.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

A Free Advertisement.

This is to advertise that I'm not in the supply business, nor in the queen-business, so don't write asking me for prices or catalogues. All I have to dispose of is answers to questions, and I run out of sorts in that department sometimes, so that I have to scratch around lively to find an answer that will fit some of the questions that are sent in.

While I'm at it, I'll mention another thing: Please don't ask me to send answers by mail. If you knew how busy I am, you would hardly ask it. Besides, it is hardly fair to the publishers and the readers of this journal, for they pay for all the information to be had, and if I should answer all letters by mail, the other readers would have no benefit from it.

Just one more thing: *Be sure* to say whether you want an answer to your question in the American Bee Journal, or where.

Now send on your questions. C. C. MILLER.

Cutting Out Queen-Cells to Prevent Swarming.

Enclosed please find a weed. I should like very much to know what it is. The whole country here is literally carpeted with it, and bees are very busy working on it. It smells very sweet when in large quantities.

1. Mr. Adrian Getaz says on page 311, that "the presence of queen-cells is the true cause of swarming." Therefore, could not swarming be kept out of the minds of the bees by cutting out every queen-cell in its incipiency, every day, or would this work evil and havoc?

2. I have one colony with so many bees in it that they seem hardly to be able to get in all together at night. The combs are jam full of brood and honey, and the tops and outside ends of the frames being sealed, I have put supers for

comb honey in the upper story, and although there is not as yet a sign of a queen-cell in the hive—and hardly any room for one—the bees will not go "upstairs." I have put in three sections containing drawn-out comb, but no honey (I have no comb with honey, such not being my lot last year), but they still refuse. What would you advise? I am in hopes this colony will not swarm for a good while yet. They are 3-bands and 5-bands, but are truly possessed of an extremely evil spirit. They will hardly let me come within 30 feet of the hive, which stands near a gate, and they ought to be used to the "traffic." Once or twice I have been forced to sprinkle a little tobacco in the fuel in my smoker. My other Italians are very gentle.

3. Honey is coming in plentifully now. I was out in the country the other day, and learned a "kink" (?) from an old fossil bee-keeper. He says: "My experience shows me that it is a great mistake to let the bees have much honey to go into the winter on. It makes them lazy, and I want my colonies with not more than a handful each at the beginning of spring, so that they will not swarm, and will be in better condition in summer and fall to 'make" honey." How is that for orthodox doctrine? I tried to argue that he should have all the bees possible for fruit-bloom, and from then on we have almost a continuous flow from wild flowers, mesquite, catclaw, sumac, cotton, etc. D. R.

Abilene, Tex., May 24.

ANSWERS.—It's hardly worth while to send plants to me. I'm not much of a botanist, and at best I am only familiar with the honey-plants that grow in my own neighborhood.

1. That's been tried over and over again. Sometimes it works, but oftener it doesn't make much difference. Looking closer at your question, I see you talk of cutting out queen-cells every day. I'm not sure whether any one has tried daily cutting out, but the remedy would be worse than the disease. For it isn't the work of a minute to cut out all incipient queen-cells, and the best you can do you will sometimes miss them. Still, if you made it a daily job, I hardly think a careful operator would let any of them go to maturity. But if you care to try the experiment, I think you will not find it "work evil and havoc."

2. I wish I was near enough to look into that hive. There must be something peculiar about the case if they are bringing in plenty of honey, are crowded in the brood-nest, and refuse to enter sections having drawn combs. Of course they have free access to the super. Cut out a piece of drone-brood and put in a section. If that doesn't "fetch" them, they're bewitched.

When I have bees as cross as you tell about, there's a death in that family, and a new queen introduced.

3. I've sometimes gone on the principle your friend does, and had colonies in the spring with so few bees there was no danger of their being lazy, and they might have done great things if they hadn't "up and died."

Introducing Clipped Queens.

Would a young laying queen be accepted as readily by the bees if her wings were clipped before introducing? It is very difficult for me to find queens in a hive of bees, and I propose to ask the sender of the queen to clip her before caging, if it will do as well. C. J. W.

ANSWER.—I've introduced hundreds of queens with their wings clipped—in fact, I'm not sure that I ever introduced a queen with whole wings. I don't think the bees pay much attention to the dress their mother wears.

Management During Swarming-Time.

1. I have as many bees as I want. If I place a queen-trap on the hive, so arranged that the queen can return to the hive from the trap, and leave the trap on until they stop swarming, what will be the result? Will I get any surplus?

2. Twelve colonies out of 14 in 10-frame hives have swarmed this season, and only one out of 26 in 8-frame hives. Is not that rather unusual? I suppose the colonies in the large hives had more surplus left over, and built up more rapidly. F. T. B.

ANSWERS.—1. Yes, you'd get some honey, but very likely you'd get your bees in bad condition. For somehow (and I'm whispering this to you, for others may not believe it), when young queens are hatched out, and bees have the swarming-fever, the young queens seem to get through the excluder zinc. Then they take French leave with a swarm. At least they did so for me. In some cases it worked all right. I believe it might be well, however, for you to try it on a small scale. But you'll have to keep track of them in some way, and take away the trap soon enough for the young queen to be fecundated, for the old queen will be killed, and all the young queens but one. Perhaps a month after the first attempt to swarm will be time to take off the trap.

2. Your colonies in 10-frame hives swarming more than those in the 8-frame is decidedly unusual.

Transferred Colony Deserting the Hive.

I transferred 5 colonies of black bees on April 22, the old fashion way, from a box-hive to a Langstroth hive. I gave them all their brood and straight comb, and the day after I transferred the colony they left the hive, brood and all. I did not see them go, and have not seen them since. Can you tell me why they left? J. J. B.

Olympia, Wash.

ANSWER.—I don't remember that I ever heard of such a case, and am at a loss to know the cause. If any one has the right explanation I'm ready to yield the floor. Some faint guesses suggest themselves, but I think it's safer to say "I don't know."

What to Do With Unfinished Sections.

As I will have several hundred unfinished sections varying from starters *not started* to half full of (dry) comb, all nice and white, will it pay me to keep them for another season? If so, give the best way to keep them. Or would it be better to cut out the comb and sell the wax, and get new sections and foundation next year? J. B. G.

ANSWER.—If they're nice and white, I'd use them this year all I could, and keep the rest for next year. There's no trick in keeping them. Keep them in a dry place. Moths are not likely to trouble them as they do old brood-combs, and if you do not care to keep them in some moth-proof box or closet, just take a look at them now and then, and if you find the worms have made any start in them, brimstone them.

Feeding a New Swarm.

A swarm issues and is hived. The next day a cold rain sets in. How long would it be safe to let it remain without feeding? F. T. B.

ANSWER.—I don't know. Some swarms carry more honey with them than others. It might be safe to let them remain three, four or more days, but I'm sure it would be safe to feed them within 24 hours.

Wants Information About Carniolan Bees.

Please give a short description of the Carniolan bees. I would like to know whether my bees are pure stock, or hybrid; and also whether the Carniolan is a distinct race, or if it is a branch of the Italian or black. Are Carniolans as easy to handle as Italians? TORONTO.

ANSWER.—I don't know enough to give a description of Carniolans by which you can decide whether your bees are pure or not, for I have heard breeders of Carniolans themselves say they could not tell them for sure by their looks. Neither will I risk getting a hornets' nest about my ears by trying to decide which is the original race of bees.

As to whether Carniolans are easy to handle, that's a hard question, too. In the first place, they had the reputation of being the gentlest of all bees to handle, but later some report them as vicious. It is possible that impurity may have something to do with the case, for certainly there has been much testimony as to their gentleness.

Will the editor please ask Rev. E. T. Abbott to give the desired description?

[As Mr. Abbott said on page 302, "I think it is just as easy to tell a Carniolan bee from a black as it is to tell a horse from a mule," no doubt he will furnish the "description" asked for, and in a satisfactory way. He has the invitation and opportunity, at least.—EDITOR.]

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Editorial Budget.

Sweet Month of Roses—June.

Then let us, one and all, be contented with our lot;
The June is here this morning, and the sun is shinin' hot.
Oh! let us fill our hearts up with the glory of the day,
And banish ev'ry doubt and care and sorrow far away!
Whatever be our station, with Providence fer guide,
Such fine circumstances ort to make us satisfied; .
Fer the world is full of roses, and the roses full of dew,
And the dew is full of heavenly love that drips fer me and you.
—James Whitcomb Riley.

A New Smoker, Zaebringer's, is described in German bee-journals. It's nothing more nor less than an atomizer, or sprayer, with a big rubber ball. But it's well spoken of. So says a "straw" in Gleanings.

A Recent Act of the Michigan legislature makes it an offense punishable by a fine of $50, or 90 days in jail, for maintaining a hive of bees on your premises, in that State, within 90 feet of the highway. So says the Michigan Farmer, published in Detroit.

Carriage Decorated with Honey-Sage.—A California correspondent reports that among the variously decorated carriages and other vehicles in the floral carnival in Santa Barbara, in April, was one covered with honey-sage of the southern portion of the State. The long, slender stalks of the plant, with the leaves and flowers, made a very pretty and novel sight. It did not look so gorgeous as many of the rigs covered with gay-colored roses, geraniums, carnations, and the like, but (as did one of the rigs that was decorated with California wild mustard) it made one of the striking features of the show. It was not learned whether the rig was that of a bee-keeper, but it was supposed it was not, as it was a better one than most bee-keepers are able to sport. At least, that was the "impression" of the correspondent.

A Cure for Bee-Paralysis.—There have been given out so many so-called "cures" for bee-paralysis, that I almost hesitate to publish another. But the one I received on May 28 comes from such a well-known and extensive firm of bee-keepers that I feel warranted in giving it a conspicuous place in these columns. It is from Messrs. Alderman & Roberts, of Wewahitchka, Fla., who have had within the past two or three years, 1,300 colonies of bees in their apiaries. Hence they doubtless have given their proposed cure for bee-paralysis a thorough trial, and know whereof they affirm. I trust others, who may be so unfortunate as to have the disease in their apiaries, will follow the directions carefully, and then report results.

The letter giving the ingredients of the remedy and its application, reads thus:

Wewahitchka, Fla., May 22, 1895.

Editor American Bee Journal—*Dear Sir:*—We have many times in the last 20 years been benefited by recipes from our brother bee-keepers, so we want to reciprocate. Below is a remedy for the *bee-paralysis*. It has been troubling our bees now for three years. *This cures it:*

Take one quart of warm water, dissolve in it two teaspoonfuls of salt and two teaspoonfuls of cooking soda. Add a tablespoonful of cider-vinegar. To this add a quart of honey, or syrup (heavy) made of sugar. Agitate it thoroughly with a spray pump, and spray the entire colony.

When the disease is very stubborn, add two drops of carbolic acid to the above.

We will have about one-third of a crop of honey this year.

Yours truly, Alderman & Roberts.

You Don't Take the Bee Journal? It must be because you've never thought what a help it would be to you in your work with the bees. For only a short time we are offering the American Bee Journal *for 10 weeks for 10 cents* to any one not now a subscriber. Better send on your dime (in stamps or silver) at once, and take advantage of this liberal offer. Then later on we should be glad to have you subscribe for a year, and also get the 160-page book—"Bees and Honey"—free as a premium. Every new subscriber who sends us $1.00 for a year's subscription is entitled to this book free. But you can take the 10-cent trial trip first, if you prefer.

Sweet Clover (Melilotus), Prof. S. M. Tracy, Director of the Mississippi Experiment Station, says is "one of the very few plants which are able to draw their supply of nitrogen from the air; and hence by and through its biennial decay it furnishes the most valuable and most expensive factor in commercial fertilizers free of cost, and the best form."

Mr. E. T. Flanagan and His Apiary.

The engraving shown on the first page this week represents the apiary of Mr. E. T. Flanagan, at Belleville, Ill. The picture was taken March 30, 1895, and appeared in the Progressive Bee-Keeper for May, in connection with the following sketch, written by Mr. Douglas D. Hammond, of Malone, Iowa:

In the foreground you will see Mr. Flanagan and five of his bright-eyed little ones. The party holding the smoker is Mr. F.'s assistant from Iowa, and, I am sorry to say, for unfavorable reasons, Mrs. Flanagan and the youngest Mr. Flanagan were not taken.

Mr. Flanagan was born in Belleville, Ills., Feb. 19, 1837, and married Miss Lily R. Mithoff, of New Orleans, La., Oct. 1, 1884, and has six children, three girls (as shown in the picture), and three boys, two of which you can see. The one in his arms he calls his *bee*-boy, and he is as fearless of the bees as most people are of so many flies.

Mr. Flanagan began his career as a bee-keeper with two colonies in box-hives in 1878, and a short time passed before he had a serious attack of the bee-fever, for when he procured the two box-hives he little dreamed of anything beyond a little honey for his own use. But a short time elapsed, however, before, in partnership with Dr. Illinski, of Cahokia, Ill., he had 1,000 colonies in Simplicity hives, and in connection with his having one of the largest apiaries in the United States, he has probably had more experience in migratory bee-keeping than any man up to date; all of which he has carried on successfully, with the exception of unavoidable circumstances, such as the loss of 300 colonies at New Madrid, Mo., caused by a steamboat taking fire.

He works principally for extracted honey, as his location has only fall flowers for surplus honey. But his main occupation is rearing bees and queens, he having sold as many as

$6,000 worth of bees in one year. He has sold several carloads at a time. He runs four out-apiaries at a distance of 9 to 15 miles from the home apiary, and owing to his large experience in migratory bee-keeping and out-apiary work, he long ago, or, in other words, was among the first to discard the Simplicity hive. He now favors for his own use a 10-frame dovetailed hive, and an 8-frame for selling; and, like many more of our best bee-keepers, prefers a leather-colored Italian, or first-cross hybrid. He generally keeps from 300 to 500 colonies, and has tried all the races of bees except Punics. He once gave as high as $35 for a Cyprian colony and queen. He has imported bees for years, but believes we now have as good bees as in Italy.

Mr. Flanagan's father died while he was young, and owing to a defect in his father's title to property, all was lost. This left him without any education or money to care for himself, and it is in justice to him to say he did not get one year in school, all told; and yet his well-written articles have been read by thousands of wide-awake bee-keepers, and valued, too. It is plain to see their value: First, his large experience; second, he is a man of truth, and not theory, for all he writes is that which he has tested.

He is a lover of flowers, poetry, and all classes of good literature. He has a happy family and home, well cared for, is always bright and cheerful, and is exceedingly generous, well posted in the Bible, and a follower of the Word. I only regret that space is so limited. He traveled over Texas in an early day, and many are the stories he has told me, on our trips from apiary to apiary, of deer and wild turkey hunting.

In referring to the picture again, let me say when these fruit-trees were in bloom it was one of the grandest sights I have ever seen. His place is well stocked with the choicest of fruit of all kinds, among which are pears he originated himself.

And now, good friends, if you want to find a kind mother, a loving father, a happy home and little ones, call where you will get a hearty welcome, at the home of E. T. Flanagan.

Mr. Leahy, editor of the Progressive Bee-Keeper, who kindly loaned the engraving on the first page, adds this paragraph to Mr. Hammond's story of Mr. Flanagan's life:

The above is such a good description of my friend and brother bee-keeper—of his home life, his originality, of his fearlessness in large undertakings, his morality and generosity—that I cannot add anything along that line but to say I know it to be true. I remember too well the helping hand, the encouragement that Mr. Flanagan gave to me years ago when I went to him to find out something about the mysteries of bee-keeping. The first bee-book I ever read was generously loaned to me by him. From this book, and from his kindly advice to me at the beginning, I trace my first steps to my present success, if success it may be called. Mr. Flanagan and I have "talked bees" in that grove when those trees were small, but the trees have now grown into a beautiful grove—they mark the glorious enterprise of the man who planted them there. They bloom and give fragrance to the air, and the bees hum among their branches. Mr. Flanagan and I have grown older, but with each year I know our friendship has grown stronger. May he live long to enjoy the fruits of his labor, is the wish of his friend— R. B. LEAHY.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

No. 2.—Bee-Management, Etc.

A good smoker is indispensable to every bee-keeper. See that it is in good order. When the fuel in it is well ignited, approach the hive and blow a few whiffs of smoke in at the entrance. Wait a minute, then blow a little more smoke until the bees set up a sort of roaring noise. Then gently commence to open the hive, and if the bees show a desire to come up, blow a little more smoke over the tops of the frames, which will run the bees back. Bees can be smoked too much, particularly when queens are to be found. Just how much to give depends upon the humor and disposition of the insects; as a general rule, hybrids, Syrians, and Cyprians require more smoke to subdue them than blacks, Carniolans, and Italians. Italians are the most easily handled.

When using smoke, care should be taken not to run the bees off the combs. Blacks and the far Eastern varieties are easily run off to the sides of the hive, or will collect in a pendulous mass on the edge of a frame that is being handled, and will possibly lose their hold and drop at your feet, which is not very pleasant to the operator. Cyprians can stand a "broad side" of smoke unflinchingly, and will only yield after continued blasts.

When a bee gets under the clothes, give it room and do not crowd it, and it will make for the light and crawl out without offering to sting.

VARIETIES OF THE HONEY-BEE.

There are quite a number of varieties of *Apis mellifica*, among which I may name the black bee, which is the most common. This variety was introduced, it is said, into Pennsylvania from Germany about the year 1627, and was transported to South America in 1845. The Italian, Cyprian, Syrian, Egyptian, Carniolan, etc., are also only varieties, and are undoubtedly of common origin. For beauty, honey-gathering capacity, docility, and most desirable qualities, the Italian is to be preferred.

In cultivating any of these breeds of bees, there is a continual, though slight, disposition to sport from a precise standard of physical and psychical characteristics to an assumption of some of the peculiarities of some other breed. This seems to be a rule attending the breeding of all cattle, horses, sheep, swine and fancy breeds of poultry, that lack that fixedness and individuality of character sufficient to stamp such breed as a distinct species.

How Long Will Foundation Keep?

How long will foundation keep good before using? I mean, when left over from year to year.

N. G. O., South Carolina.

ANSWER.—If the wax-moth is kept from it so that no eggs are deposited, it will remain good for a number of years. Wax hardens with age, but it will soon soften if exposed to a gentle heat. When foundation is left over until another season, you can make it just as good as new-made, by simply exposing the sheets to the heat of the sun for a few minutes.

Linden or Basswood—Northern Georgia—Transferring.

1. "We have a tree here called linn, and a good tree for honey. Is it what is called the basswood or linden?

2. What sort of a place is northern Georgia for a bee-country?

3. Would you transfer from the old hewn-out log-hive to movable-frame hive? J. J. W., Kentucky.

ANSWERS.—1. Yes, sir.

2. There are portions of it that are very good. All the cereals, grasses, and fruits that are cultivated in higher latitudes grow well there. But never think about moving to a new place before you first go to see it.

3. I certainly would. I would allow a prime swarm to issue from the old log-gum, which I would hive in a frame hive; and then in 21 days I would demolish the old log—cut out the combs, and use all the straight worker-combs in the new hive, and transfer the bees to the same.

Bees in Northwest Georgia—Treatment of Swarms—Piping—Fastening Foundation in Sections.

We have a good prospect for honey in the near future. Bees have been storing a little surplus, but there is a little check-up at present. I took off a box the other day—weighed 27½ pounds, and left another case which was under it about half full. I put into winter quarters 68 colonies, and they came out all right.

Swarming has been the order of the day. For the last four weeks we have had 41 swarms, but we hived all second-swarms back.

1. Which do you think is the best plan—to put the new swarm in a new place, or to set it on the old stand and move the old colony to a new place? Here is the way I have been treating second swarms: Hive them, and set them close beside the old hive for two days, and then take the frames out

and shake the bees in front of the old hive, and the work is done.

2. How does the queen make the noise in piping—with her wings or mouth? Give me the Italians, for they are the hustlers?

3. What is the best way to fasten foundation in sections?

Hurrah for the "Southern Department" of the American Bee Journal! S. B. PETTYJOHN.

Trion Factory, Ga., May 19.

ANSWERS.—1. If you are working the colony for comb honey at the time of swarming, there will be less interruption in the working-force in the surplus department if you place the new swarm on the old stand.

2. Piping is done with the wings.

3. The quickest and best way to fasten the foundation in the sections is to use a machine called a "foundation fastener." You can also do it by dipping the edge of starters in a pan of melted wax. This way is sure.

How and When to Transfer Bees.

I want to transfer from box-hives into movable-frame hives. What is the best way and when the best time to do it? What do you think of the idea of putting the box-hive on top of the new hive (the box-hive has a bottom) and remove the top of the new hive, letting the box-hive rest on the frames or edges of the new hive, and stop all escape except through the new hive and out the regular opening in the new hive; and leave them thus for several days, before driving out of the old hive? Do you not think they will drive easier, as they by this time will consider this new hive part of their home?

E. R. L.

ANSWER.—If you want to simply "*drive*" your bees into new hives, the plan you suggest will make it easier for you; but if you want to transfer bees and combs from your box-hives into the movable-frame hives, then it would hardly be worth the trouble to use your arrangement.

An expert can transfer bees at any time of the year, only so the bees can fly; but beginners should always be on the safe side, and only transfer at times when the bees are gathering honey. Spring is the best time. The earlier the better. As the swarming season is now pretty well over with you, I would defer the work until next February, and perform the operation as described in the bee-books. But don't use twine strings or tape for holding the comb in the frames. Such stuff is not fit. Use transfer-clamps, or sticks, to hold the combs in the frames. The combs thus held will be perfectly secure, and *kept straight* until fastened by the bees.

When bees are gathering no honey, and there is danger of robbing, make your transfers in a close room. When the colony is deficient in stores, you must feed.

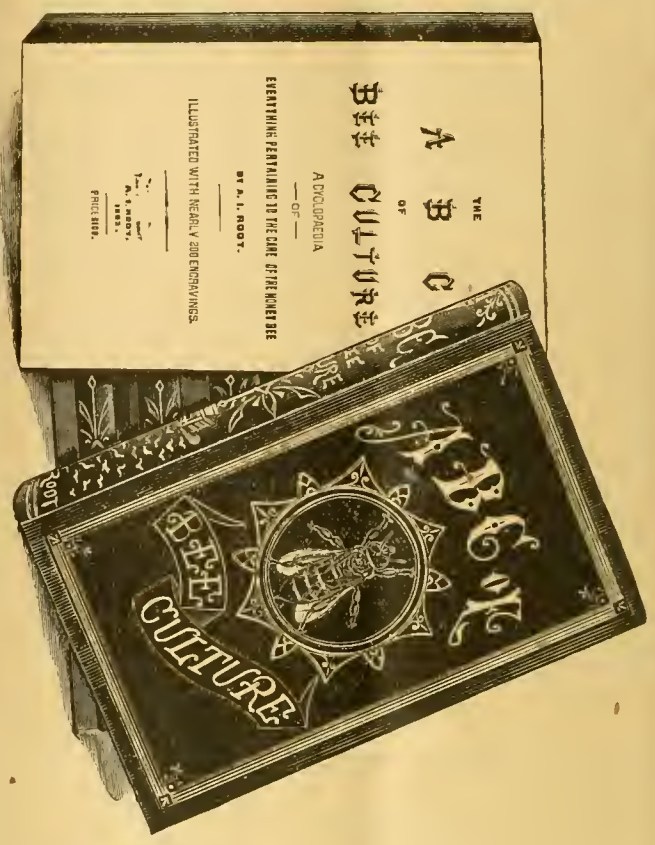
Ten Weeks for Ten Cents.—This is a "trial trip" offer to those who are not now subscribers to the American Bee Journal. Undoubtedly there are thousands who would take this journal regularly if they only had a "good taste" of it, so as to know what a help it would be to them in their work with bees. In order that such bee-keepers may be able to get that "taste," the very low offer of "10 weeks for 10 cents" is made.

Now, dear reader, you cannot do a better service than to show this offer to your neighbor bee-keeping friends, and urge them to send on their 10 cents and get the next 10 numbers of the old American Bee Journal. In fact, *you* could afford to send the 10 cents for them, and then after the 10 weeks expire, get them as new subscribers for a year. They will be easy to secure then, for the 10 numbers will be a fair trial, and they will want the Bee Journal regularly if they are at all interested in bee-keeping.

Remember, it's *only 10 cents for 10 weeks*, to all not now subscribers to the Bee Journal.

Only One Cent a Copy for copies of the American Bee Journal before Jan. 1, 1895. We have them running back for about 10 years. But you must let us select them, as we cannot furnish them in regular order, and probably not any particular copies. Just send us as many one-cent stamps as you may want old copies, and we will mail them to you.

A Big Offer.—Send two new subscribers to the American Bee Journal for one year, at $1.00 each, and get as *your* premium a free copy of Root's "A B C of Bee-Culture" bound



in cloth. This offer will hold good only so long as the present stock of books holds out; so you'd better send your order within a couple of weeks. It's a big offer, and you ought not to miss it. It is a 400-page encyclopedia of bee-keeping, fully illustrated. Over 60,000 copies have already been sold. The regular price, postpaid, is $1.25; or we will club it with the American Bee Journal for a year—both for only $1.80.

Honey as Food and Medicine.—A new and revised edition of this 32-page pamphlet is now issued. It has 5 blank pages on which to write or paste recipes taken from other sources. It is just what its name indicates, and should be liberally distributed among the people everywhere to create a demand for honey. It contains a number of recipes on the use of honey as food and as medicine, besides much other interesting and valuable information. Prices, postpaid, are: Single copy, 5 cts.; 10 copies 35 cts.; 50 for $1.50; 100 for $2.50. Better give them a trial. Send all orders to the Bee Journal office.

Queens and Queen-Rearing.—If you want to know how to have queens fertilized in upper stories while the old queen is still laying below; how you may *safely introduce* any queen, at any time of the year when bees can fly; all about the different races of bees; all about shipping queens, queen-cages, candy for queen-cages, etc.; all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know—send for Doolittle's "Scientific Queen-Rearing"—a book of over 170 pages, which is as interesting as a story. Here are some good offers of this book:

Bound in cloth, postpaid, $1.00; or clubbed with the BEE JOURNAL for one year—both for only $1.65; or given free as a premium for sending us three new subscribers to the BEE JOURNAL for a year at $1.00 each.

Bound in paper cover, postpaid, 65 cents; or given free as a premium for sending us two new subscribers; or clubbed with the BEE JOURNAL a year—both for only $1.40. Send all orders to the BEE JOURNAL office.

✻ BEST GOODS ✻

At **lowest prices** are what we are all after. The **QUALITY** of Cary's Goods has never been questioned. His XX White Thin Foundation and Polished 1-Piece Sections are the Finest on the market. His

BEES and QUEENS

are from the best strains, and reared and shipped in the way that long years of experience have shown to be the best.

He has the largest Stock of

BEE-KEEPERS' SUPPLIES

in New England; and as to Prices, you have only to send for a Catalog and compare them with those of other dealers.

☞ To those living in the East, there is the still further consideration of low freight rates Addresss,

W. W. CARY, COLRAIN, MASS.

22A5 Mention American Bee Journal when writing.

---

300 Colonies of A No. 1 Italian

Bees in 8-fr. Dovetailed Hives. for sale CHEAP. Also a Full Line of Apiarian Goods, **all new**, at living prices. Send for Catalogue. to—

E. T. Flanagan, Box 783, **Belleville, Ills.**

11A13 *Mention the American Bee Journal.*

UNTESTED ITALIAN QUEENS.

Reared from a Queen valued at $50. Can't be excelled as honey-gatherers; 75 cents each. Address

W. J. FOREHAND,

22A5 FORT DEPOSIT, ALA.

Mention the American Bee Journal.

STILL IN THE LEAD.

HILTON'S Chaff Hives, T-Supers, White Polished Sections, Foundation, Smokers, and everything needed in the Apiary.

—Send for 1895 Catalog—

GEO. E. HILTON, FREMONT, MICH.

11A13 *Mention the American Bee Journal.*

Theodore Bender's ITALIAN QUEENS

Are bred for Business, Beauty & Gentleness. He makes a Specialty of breeding Fine Italian Queens that rank with the best in the world. Untested Queens, in May, $1.25 each; June $1 each, or 6 for $5.00; July to October, 75c. each or 6 for $4.25. Tested Queens, $1.50 each. Send for Free Illustrated Circular to—

THEODORE BENDER,

22A5 18 Fulton St., CANTON, OHIO.

Mention the American Bee Journal.

The American.

STRAW HIVE Latest and Best.

Perfectly adapted to Modern Bee Culture.

Illustrated Circular Free.

HAYCK BROS., QUINCY, ILL.

19A8 Please mention the Bee Journal.

GARDEN CITY, Kan., May 13, 1895.

P. J. THOMAS, Fredonia, Kan.—

Honor to whom honor is due. The Queen you sent me proved the best out of six I bought from different Breeders.

J. HUFFMAN.

Big Yellow Golden Italian Queens 75c

Three for $2.00. Three-handed, same price. 1-Frame Nucleus, with Untested Queen, $1.75 2-frame, $2.25. Satisfaction guaranteed.

P. J. THOMAS, Fredonia, Kan.

Mention the American Bee Journal. 22A5

We can fill your orders for Dovetail Hives, Sections, Foundation, etc., by RETURN mail. Have **A. I. Root Co.'s** goods at their **prices.** Will **save you freight,** and get goods to you in a **few days.**

Catalogue Free. JOHN NEBEL & SON. High Hill. Mo.

20Atf *Mention the American Bee Journal.*

AMONG THE BEE-PAPERS.

POINTS IN JUDGING BEES.

Here are nine points given by S. E. Miller, in Gleanings, in the order of their importance:

1. Prolificness of the queen.
2. Honey-gathering qualities of the workers.
3. Hardiness in wintering.
4. Disposition of workers—gentleness, etc.
5. Non-swarming.
6. Comb-building.
7. Longevity of queen and workers.
8. Size of workers.
9. Color.

Many would put non-swarming higher in the list, but Mr. Miller says: "So long as swarming comes with prosperity and seasons of large crops of honey, and non-swarming is accompanied by failures, I should consider swarming the lesser of two evils, if swarming may be considered an evil." In which conclusion all might concur *if* they should concur in the data.

C. Davenport would not agree in placing prolificness of the queen at the head of the list, for four pages farther on in the same number he says:

"Last season (a poor one in this locality) I had in the home yard a high-priced queen that I had bought the previous summer. She was in a 10-frame hive, and she needed 10 frames, for she was very prolific. This colony did not swarm. They partly filled one super. There were perhaps 15 sections completed. An 8-frame hive stood right beside this one, the queen of which was a hybrid. I do not believe she laid an egg in either of the outside combs during the entire season; yet this colony filled 96 sections, and had plenty of stores for winter; and it is to-day one of the strongest colonies I have. Another colony, in an 8-frame hive, whose queen, a pure Italian, was also bought the previous summer, filled five supers of 24 sections each. There were a few in the last super that were not completed. They also had to be fed a little in the fall; but they are in good condition at this writing. This queen is hardly equal to 8 frames; but I regard her as one of the most valuable ones that I ever owned.

NUMBER OF FRAMES.

"Enthusiastic," in Review, says he spent years in experimenting with all sizes from five to nine frames, and is fully persuaded that for his location and management nine frames are best. Now some one will ask him why he doesn't experiment with ten or more frames.

SINGLE STORIES VS. DIVISIBLE BROOD-CHAMBERS.

Says Ernest Root in Gleanings: "How the divisible brood-chamber can be handled any more rapidly than a good hive containing modern Hoffman frames with V edges, is past my comprehension. I have handled the former somewhat in our own apiary. That is to say, we have had a Heddon hive in our yard for a number of seasons; and I have manipulated that hive perhaps more than any other one hive in our yard. We have also had a Danzenbaker hive in our yard for a part of one season. I have seen divisible-brood-chamber hives handled

SPECIAL OFFER.

For July and August only. To those who have never tried our strain of Honey-Gathering Italians, we will make this Special Offer for July and August only, to introduce our Bees in your locality: We will send one Warranted Queen in July and Aug. for the trifling sum of 50 cts. **Remember,** the Queens we are going to send out for 50 cts. are warranted to be purely-mated, and if not, send us a statement of the fact and we will send another free of charge. Only one Queen will be sent at the above price to one address. If you want any more you must pay full price as per Table of Queens in our Circular, which we mail with each Queen. Address all orders to—

Leininger Bros., Fort Jennings, Ohio.

22A5 *Mention the American Bee Journal.*

SUPPLIES BEES QUEENS

LARGE STOCK. LOW PRICES. Catalogue Free.

I. J. STRINGHAM,

105 Park Place. NEW YORK, N. Y.

HELLO!

Had you noticed that we have a bee-journal in the South? Well, we have. Send us $1.00 and receive "THE SOUTHLAND QUEEN" one year. Fresh, Practical and Plain. Jennie Atchley begins a Bee-Keepers' School in it June 15.

A Steam Bee-Hive Factory. Send for Free Catalogue and Sample Copy of "The Southland Queen."

THE JENNIE ATCHLEY CO.

22Atf BEEVILLE, Bee Co., TEX.

GOLDEN QUEENS Solid Yellow, $1; Yellow to tip, 75c.; darker 60c. Tested $1 to $2. Breeders, $3. Best, $5. Samples of Bees, 2c. None better for Honey, Beauty and Gentleness. Ready now. Fully guaranteed. F. C. MORROW, Wallaceburg, Ark.

20A13 *Mention the American Bee Journal.*

PASTE That Will Stick ANYTHING.

We have finally succeeded in finding a Paste that will stick labels to tin, glass, etc.—just thing bee-keepers have wanted. It will do the business wherever any "stickum" is required. It is guaranteed to do the work. It is put up ready for immediate use, in the following size packages, and at the prices given, by express: ½-gal., 70c.; 1 gal. $1.00; 2, 3, 4 or 5 gals., 75c. per gal. It weighs about 8 lbs. to the gallon. Sample of Paste, postpaid, 25c.

Address all orders to—

GEORGE W. YORK & CO.,

CHICAGO, ILLS.

Promptness Is What Counts!

Honey-Jars, Shipping-Cases, and everything that bee-keepers use. **Root's Goods at Root's Prices,** and the best shipping point in the country.

Dealer in Honey and Beeswax. Catalogue Free.

Walter S. Ponder

162 Mass. Ave. INDIANAPOLIS, IND.

H. G. Acklin, 1024 Mississippi St **St. Paul, Minn.**

Northwestern Agent For

The A. I. Root Co.'s Apiarian Supplies

Send for Price-List } **BEES AND QUEENS** For Sale.

21A17 *Mention the American Bee Journal.*

YELLOW TO THE TIP— Are the Italian Queens that I can send by return mail at $1.00 each or six for $5.00. Not one in 100 will prove mismated, and any that do not produce three-banded Bees will be replaced. Tested Queens after June 15th, same price as above.

W. H. PRIDGEN,

22A5 CREEK, Warren Co., N. C

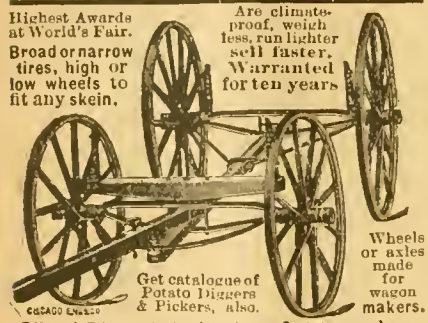
Mention the American Bee Journal.

McCALLUM STEEL WHEEL WAGONS

Highest Awards at World's Fair.

Broad or narrow tires, high or low wheels to fit any skein.

Are climate-proof, weigh less, run lighter sell faster. Warranted for ten years



Wheels or axles made for wagon makers.

Get catalogue of Potato Diggers & Pickers, also.

Liberal Discounts to Agents or first to purchase.
McCallum Steel Wheel Wagon Co., Aurora, Ill., U. S. A.

14A13t Please mention the Bee Journal.

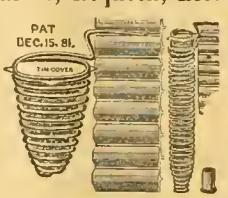
TAKE NOTICE!

BEFORE placing your orders for SUPPLIES, write for prices on 1-Piece Bass wood Sections, Bee-Hives, Shipping-Crates Frames, Foundation, Smokers, etc.

PAGE & LYON MFG. CO.
NEW LONDON, WIS.

Mention the American Bee Journal.

Control Your Swarms, Requeen, Etc.



Send 25c. for samples of West's Patent Spiral Wire Queen-Cell Protectors, and Patent Spiral Queen Hatching and Introducing Cage; & best Bee-Escape, with circular explaining. 12 Cell-protectors, 60c.; 100, $3. 12 cages, $1; 100, $5, by mail. Circular free. Address, **N. D. WEST, Middleburgh, Schoharie Co., N. Y.** Sold also by all leading supply-dealers. 22A5

Mention the American Bee Journal.

Italian BEES & QUEENS

Ready in May. Queens, $1.00. Bees by the Pound, $1.00. Two-frame Nuclei, with Queen $2.50. One-frame, $2.00. Also, **Barred P. R. Eggs**, for setting, $1.00 per 15.

Mrs. A. A. SIMPSON, Box 48, Swarts, Pa.
15A13t Please mention the Bee Journal.

Golden Italian Queens.

One Untested Queen	before June 1st			$1.00
Six	"	"	"	5.00
One	"	after	"	.75
Six	"	"	"	4.20
One Tested	"	before	"	1.50
Six	"	"	"	7.50
One	"	after	"	1.00
Six	"	"	"	5.00

One Selected Tested for breeding, $3.00.
Price-List Free.

W. H. WHITE,
22A5t DEPORT, Lamar Co., TEX.

PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook Montgomery Co., N. Y.

FOR SALE.

I have some 35 good Bee-Hives to sell, with all the Frames and Honey-Boxes—some 10 are Heddon Hives, and 6 double 10-frame, balance 8-frame, with stuff for honey-boxes. Smokers, and some Foundation, Bee-Veils, and all the Fixtures for bee-keeping which I will sell for $2.00 per hive, and throw in all the fixtures. Big bargain here. Correspondence solicited. **SAMUEL CLARK, M. D.,**
22A2t LAWRENCE, McHenry Co., ILL.

by bee-keepers who were very enthusiastic over them; but, taking it all in all, I *think* I can get a more satisfactory knowledge with a given number of hives containing full-dedth Hoffman frames in less time than from any equal number of horizontally divided brood-chamber hives I have ever seen or read of.

Now, why do I like mine (or, more correctly, Hoffman's) better? A Hoffman-frame hive can be split *perpendicularly* in two parts. A divisible-brood-chamber can be split horizontally in two parts; but it will be apparent that such a split does not show brood *surface*—only the *edges* of the combs, and those very imperfectly. A *perpendicular* split does show the *whole surface* of two combs. Then if we remove one comb we have for examination the two surfaces of the one comb, besides two surfaces of each of two other combs."

MARKET QUOTATIONS FOR HONEY.

Complaint having been made that Shea & Co. quoted honey too high, they write to Review: "There are always two prices. Say, for instance, we quote honey in the country at 16 to 17 cents, while the same goods sell in the city to the jobbing trade at 15 cents. Do you want the lowest quotations, or what the stuff is actually sold for?" To this the editor replies: "The figures the bee-keepers want given in quotations are those that they may expect to realize for honey if sent to the market from whence come the quotations. Exceptional prices are not wanted.....Each dealer should give the *average* price at which *he* is selling each grade of honey."

PLANTING THE LINDEN OR BASSWOOD.

It would take a good many years for basswood or linden trees to yield honey—perhaps 20. We set out a basswood orchard something over 20 years ago, and it is not yielding honey very satisfactorily even yet."—E. R. Root, in Gleanings.

WHICH HAS THE GREATER INFLUENCE, THE QUEEN OR THE BEES, IN DETERMINING THE AMOUNT OF BROOD?

F. L. Thompson raises the above question in Review, and says: "Two years ago in April I dug out and transferred a wild swarm from an abandoned skunk-hole. The capacity of the hole, which was completely filled with comb, probably exceeded 16 Langstroth frames. They then had an amount of brood equal to 6 solid Langstroth frames, and the colony had to be divided, because it was simply impossible to get the bees in one 8-frame Langstroth hive, or anywhere near it. This was very nearly the time of year when our colonies are weakest. Exceptional? Yes, but afterward that same queen would have been taken for a very ordinary queen indeed, judging from the amount of her brood. I always think of her behavior *in* and *out* of the skunk-hole, when reading arguments for the 8-frame size."

The editor thinks that at least sometimes the queen is the more important factor, saying: "I have seen many colonies come out of winter quarters quite populous, yet they would rear only a small amount of brood and be entirely outstripped by other colonies that were quite weak in numbers in early spring."

See "A B C" offer on page 366.

COMB FOUNDATION.

Made by Improved Machinery.

Get Samples.

Here are prices by the pound—just compare.

	1 lb.	5 lbs.	10 lbs.	25 lbs.
Heavy or Medium Brood	42c.	40c.	39c.	38c.
Light "	44	42	41	40
Thin Surplus	50	47	46	45
Extra-Thin Sur.	55	52	51	50

☞ If wanted at those prices, send to

W. J. Finch, Jr., Springfield, Ill

WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

Woodcliff Queens.

I will send a Guaranteed 5-Banded Yellow Queen, bred from a Breeder selected from 1000 Queens (some producing over 400 lbs. of honey to the colony); or a 3-Banded Italian Leather-Colored Queen direct from a Breeder imported from Italy. Oct. '94—**at 75c.**, and a special low price for a quantity.

My secret is to sell an extra-large amount, which enables me to sell at low prices. Will run this spring 350 Nuclei—have 1 home and 4 out apiaries. **Booking Orders Now**—will begin shipping about May 1st. No Queens superior to my Strain.

☞ Send for Descriptive Catalogue and Testimonials, to

WM. A. SELSER, WYNCOTE, PA.

COMB FOUNDATION.

Wholesale and Retail.

Quality always the best. Price always lowest.

Working Wax into Foundation by the lb. **a Specialty.** I can make it an object for you in any quantity, but offer special inducements on straight 25 or 50 lb. lots. Or for making large lot of Wax into Foundation. I am furnishing large Dealers, and can also please you. **Beeswax taken at all times.** Write for Samples and Prices, to

GUS DITTMER, AUGUSTA, WIS.
Reference—Augusta Bank. 16Atf

Globe Bee Veil

By Mail for One Dollar.

Five cross-bars are rivited in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through. It is easily put together and folds compactly in a case, 1x6x7 inches, the whole weighing but 5 ounces. It can be worn over an ordinary hat; fits any head; does not obstruct the vision, and can be worn to bed without discomfort. It is a boon to any one whom flies bother, mosquitos bite, or bees sting.

☞ This Veil we club with the Bee Journal for one year—both for $1.75; or give free as a Premium for sending us 3 New Subscribers to the Bee Journal at $1.00 each.

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

IMPORTED Italian Queens reared this yr., $3.50 each. Tested Queens—**Breeders**—$1.50 to $2.00 each.
21A **W. C. Frazier. Atlantic, Iowa.**

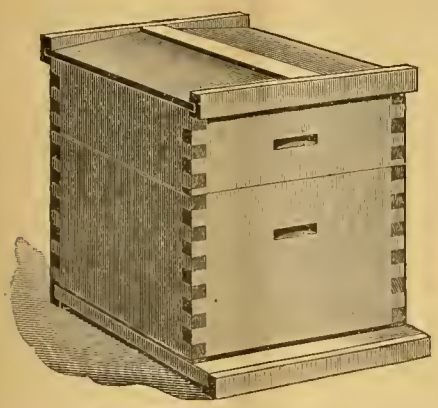
WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

Wants or Exchanges.

This department is only for your "Wants" or bona-fide "Exchanges," and such will be inserted here **at 10 cents a line** for each time, when specially ordered into this department. Exchanges for cash or for price-lists, or notices offering articles for sale, will not be inserted here—such belong in the regular advertising columns, at regular rates.

TO EXCHANGE—Buzz-Saw, Shipping-Cases, Laug. Section-Frames with tin separators, for Queens, Honey, or own offer.
22A4t G. M. DEER, Riga, Mich.

WANTED—I have some fine Mastiff and Collie Shepherd Pups to exchange for offers. Write me. SCOTT BRILLHART,
23A1 Millwood, Knox Co., Ohio.



—NOTICE—
To Bee - Keepers and Dealers.

I have one of the largest Factories in the West, devoted entirely to the manufacture of Bee-Keepers' Supplies.

Having made arrangements with the inventor to manufacture the "Higginsville Hive-Cover," I will place it on all hives sent out this year, unless otherwise ordered.

Write at once for large illustrated Catalogue for 1895, giving full description and prices of Higginsville Hive-Covers, Dovetailed Hives, Sections, Frames, Supers, Foundation, Crates, Boxes, Smokers, Extractors, etc.

Write for prices on large quantities.

E. L. Kincaid, Walker, Vernon Co., Mo.

Mention the American Bee Journal.

California

If you care to know of its Fruits, Flowers, Climate or Resources, send for a Sample Copy of California's Favorite Paper—

The Pacific Rural Press

The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.40 per annum. Sample Copy Free.

PACIFIC RURAL PRESS,

220 Market St., - SAN FRANCISCO, CAL.

BEGINNERS.

Beginners should have a copy of the Amateur Bee-Keeper, a 70-page book by Prof. J. W. Rouse. Price 25 cents; if sent by mail, 28c. The little book and the Progressive Bee-Keeper (a live, progressive 28-page monthly journal) one year, 65c. Address any first-class dealer, or

LEAHY MFG. CO., Higginsville, Mo.

APIARIAN SUPPLIES VERY CHEAP —"Amateur Bee-Keeper"—how to manage bees, etc.—25 cts. The "Model Coop." for hen and her brood Wyandotte, Laugshan and Leghorn Eggs for hatching. Cat. free, but state what you want

J. W. ROUSE & CO., Mexico, Mo.

BIG DROPS

of water has made the vegetation. Now the sun shines—the Honey wells up—the Bees gather it, and every Bee-Keeper should have all needed **Supplies at once.** Catalogue Free.

Thos. G. Newman, 147 South Western Ave. **CHICAGO, ILL.**

ONE-PIECE SECTIONS---CHEAP !

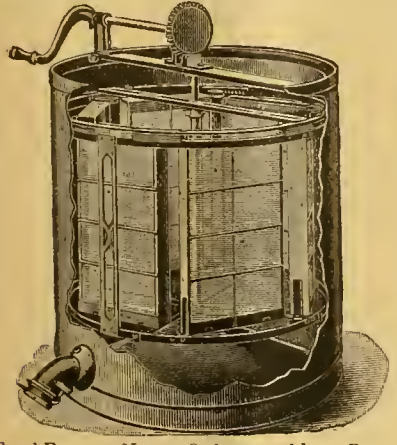
In Order to Reduce Our Stock, We Offer

No. 1 CREAM SECTIONS — 4¼x4¼x7-to-ft.; 1⅜, 1⅞, 1 15-16 and 2 inch:
1000 for $1.50. 5000 at $1.40 per M.
10,000 at $1.35 per M.

No. 1 WHITE SECTIONS — 5¼x6¼x2, open on two 5¼ sides:
1000 for $2.50. 5000 at $2.35 per M.
10,000 at $2.25 per M.

G. B. LEWIS COMPANY, Watertown, Wis.

WILLIAMS' Automatic Reversible Honey-Extractor.



Perfect in Principle and Workings. Here is what the veteran bee-keeper, N. E. France, of Platteville, Wis., says of it: "I consider the Williams Automatic Reversible Extractor head and shoulders above any I have ever used; and furthermore, consider it the BEST on the market."

100 Italian Queens.

Reared in 1894. We make the readers of the Bee Journal **A Special Offer,** in order to have them move off quickly: for the next 30 days we will sell these Queens as follows:

One Queen reared in 1894	$ .75
6 Queens " "	4.00
12 " "	7.00

These Queens were reared from fine stock and are right in their prime; they are a great bargain

☞ For Price-List No. 2, of Extractors, Bees and Queens—address,

Van Allen & Williams, Barnum, Wis.

P. S.—We have in one of our bee-yards, a few Mismated Queens—to those that want them, 25c. for one, 5 for $1. Stamps taken for single Queen.

Send Express Money Order payable at Barnum, or P. O. Money Order payable at Boscobel, Wis.

General Items.

Bees Swarmed Nicely.

We have had a very good time for bees in north Texas this spring. Bees wintered well, and have been swarming nicely. I have 68 colonies in Simplicity hives, all of which are in good condition.

P. F. GASSAWAY.

Floyd, Tex., May 2.

Outlook is Promising.

We have had frost every night for the past week. Early blossoms are badly damaged, and clover badly cut down. In the midst of it all we are ever hopeful bee-keepers. Bees seem to be in good condition. There has been some loss through balling of queens. Drones have been flying. On the whole, the outlook is promising where bees were well provided with winter stores.

JOHN MCARTHUR.

Toronto, Ont., May 18.

Hot Weather in California.

We have just gotten over some of the very hottest weather we have had at this time of the year; it was hotter than I ever felt it in June, when we get some of our first hot weather of the year. It is now cool and nice; the indications now are that it may rain in a few days. As a contrast to our weather I notice by to-day's papers that the Eastern denizens are having a big freeze—vegetables and such things have gone by the board. I am sorry for the sufferers; but they should be in this State if they want comfort. I trust that it will not cripple the honey-business, too.

W. A. PRYAL.

North Temescal, Calif., May 14.

Using Old Hives—Removing Propolis.

A correspondent complains that he has been unable to induce swarms to accept old hives, and contentedly make them their home. I think if he will place, one, two, or three frames of brood (in all stages of development, but specially that which is unsealed) in a tolerably clean hive, he will have little or no trouble in keeping his bees. Every animal is inclined to remain with its young, and bees are no exception to this rule, particularly when the unsealed brood needs feeding and nursing.

I have found it a very convenient method, to remove propolis from the hands, to smear the propolis, rubbing it thoroughly with lard, any soft grease, machine oil, or any of the fatty oils, and then wash it all off with soap and water. F. O. BLAIR.

Trinidad, Colo.

Bee-Keeping in West Virginia.

I put 28 colonies (all blacks) into winter quarters about Nov. 10, 1894, but two of them were queenless, and of course came out this spring queenless, so I united them with two others.

I wintered them as follows: I put part of my bees into an up-ground cellar, made thus: Planked up and down with inch lumber, tongued and grooved, ceiled inside with inch lumber, filling a 10-inch space between with sawdust. The balance of the bees I left on the summer stands, and put on winter-cases 4 inches larger all around than the hive, and filled the space between with dry forest leaves. All 28 came through the winter, but those wintered in the cellar, or house, seemed to be in the best condition.

My bees, during the last few days of April and May until the 12th, seemed to build up the fastest and gathered the most honey I ever saw in this country for this season of the year. But now, as I am writing, the bees are perfectly dormant, and remained in the hive all day yesterday on account of a cold wave, and it snowed

quite a flurry this morning. This cold wave will be hard on the bees.

We had a wonderful apple-bloom, but we fear this cold wave will blast our hopes, as we were expecting a fine crop of apples after the bees had gotten a good supply of nectar from the bloom.

I am much delighted with the weekly visitor—the American Bee Journal. I feel that I could not make a success with my little apiary without it. If I get "tangled" a little during the week, I just wait until Saturday afternoon, when the Bee Journal steps in, and I at once consult it, and I soon find something that lets me out.

IRA SHOOKEY.

Long, W. Va., May 18.

Hard Winter for Bees.

Last fall I had about 28 colonies of bees. It was a hard winter for bees, and now I have just about 15 left from 28.

FRED EISEMANN.

Chelsea, Mich., May 24.

Prospects Not Good.

Bees are very strong—I had several swarms, and they stored considerable honey the first week in May, but they are doing but little now, with no prospect for a good honey crop. Horsemint, our main dependence, is a total failure this season, as well as last. J. D. GIVENS.

Lisbon, Tex., May 20.

First Swarm—Overstocked.

To-day my first swarm of bees came out—the earliest I have had for years. My only desire is for a No. 1 field of bee-pasture. My poor bees will be badly disappointed, though, with about 1,500 colonies in a circle of 4 to 5 miles in diameter. How can these poor, winged things get enough to satisfy both them and me? S. M. CARLZEN.

Montclair, Colo., May 22.

Bees in Montana.

Some one has called for a report from Montana. I don't live there, but I can tell him what I know about that place in regard to bee-culture. I shipped a colony of bees to a Mr. Brockway, at Billings, Mont., last season. They arrived in good condition, and swarmed three times, and stored about 100 pounds of surplus honey. Mr. B. wrote me a few weeks ago, saying that his bees had wintered well. Without doubt bees would do well there, if handled rightly.

Onsted, Mich. L. E. EVANS.

Cold Weather—Wintering.

The cold freeze last night beat all the freezes I ever looked on in a May day, for east Michigan fruit of almost all kinds is cut. Alsike clover is drooped. My bees have been shut in for four days—some of them have made the stores disappear as if by magic.

I commenced last winter with 11 colonies, all strong and well cared for, with chaff hives and cushions, but in February malaria fever got the best of me, and kept me housed for about eight weeks, and I could not attend to them.

In March we had a soft snow from the East; it was a heavy, driving storm, and it drove into half of my hives and smothered two of the heaviest colonies I had. The rest of them were left in poor condition. The other colonies facing south are in the best of condition. Three years of experience tells me that the east is not best to face hives. If I had been able to get out at the time it would not have happened.

The most of the bees in this locality suffered last winter—about one-third or more are dead; and the reason is, as near as I can find out, they were left in a haphazard condition for winter. I have looked at some colonies that died, and there were lots of stores in the adjoining combs that they were not on. My belief is those colonies starved to death. The reason is this: In a long, cold spell the bees will not go around the end of the frames or break cluster, and when all the honey is consumed they starve. Now, then, if those colonies had had a Hill device, or something of that description, would they have starved? I have not lost a colony in that way.

I think the reason most of the folks lose so many bees is that they do not understand them. They would do better if they would take the American Bee Journal, or some other good bee-paper. FRED CARD.

Burns, Mich., May 17.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., May 23.—The trade in comb honey is very light at this time of the year—as it is between seasons. Soon we will get the new crop, and it will come on a bare market. Just now what little comb sells brings 14c. for the best grades. Extracted, 5½@7c. All good grades of beeswax, 30c.

R. A. B. & Co.

CHICAGO, ILL., Mar. 18.—Demand is good for all grades of honey excepting dark comb. We quote: Fancy comb, 15c.; No. 1, 14c. Extracted, 5@6½c. J. A. L.

KANSAS CITY, MO., May 20.—The demand for comb honey is light, with considerable on the market. Receipts of extracted are light—demand fair. We quote: No. 1 white comb, 1-lbs., 13@14c.; No. 2, 12@13c.; No. 1 amber, 12@13c.; No. 2, 8@10c. Extracted, 5@7c. Beeswax, 25c. C. C. C. & Co.

CINCINNATI, O., May 20.—The market is very quiet. No change since our last. We quote: Choice white comb honey, 12@16c. Extracted, 4@7c.

Beeswax is in good demand at 25@31c. for good to choice yellow. C. F. M. & S.

PHILADELPHIA, PA., May 18.—Comb honey is in poor demand. Large stores are now waiting for the new crop. Extracted is in fair demand. Beeswax has declined some, but good sales keep market from being overstocked. We quote: Comb honey, 9c. Extracted, 4½@6c. Beeswax, 29@30c. W. A. S.

NEW YORK, N. Y., May 24.—White comb honey is well cleaned up. Considerable buckwheat remains on the market, and, as the season is about over, some of it will have to be carried over. Extracted is doing fairly well, with plenty of supply to meet the demand. New southern is arriving quite freely. We quote: Extracted, white, 6@6¼c.; amber, 5@5½c. Southern, common, 45@50c. per gallon; choice, 60@65c.

While beeswax holds firm at 31@32c., we think it has reached top market and do not expect it to go higher. H. B. & S.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

J. A. LAMON, 43 South Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 120 & 122 West Broadway.
CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.

Kansas City, Mo.

C. C. CLEMOMS & Co., 423 Walnut St.

Buffalo, N. Y.

BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

Philadelphia, Pa.

WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

A Grand Bee-Smoker is the one offered by W. C. R. Kemp, Orleans, Orange Co., Ind. It has a 3-inch fire-barrel, burns all kinds of fuel, and is simple, efficient and durable. Send 100 cents for a sample smoker, and you will have a rare bargain.

Doctor's Hints

By DR. PETRO, Chicago, Ill.
100 State Street.

Some Causes of Headache.

Decayed teeth are a frequent source of some of the most excruciating headaches, even though the teeth do not ache.

Excessive study of books, especially by lamp-light, often occasions serious headaches.

Indiscriminate use of tobacco, either smoking or chewing, can cause violent headaches.

Irregularity in eating, instead of at stated hours, frequently results in oppressive headaches.

An overloaded stomach usually produces a more acute, intense headache.

Constipation is another frequent source of severe headaches. A saline cathartic—salts—is the best and safest remedy.

A cold in the head often causes a stupefying headache, especially over the eyes and root of the nose. Cloths wrung in hot water and tightly held to the forehead often gives immediate relief.

Malaria is a potent cause for most painful and persistent headaches, for which proper remedies should be taken—better still, get away from malarial districts.

In hundreds of cases the headache has its origin in defective eye-sight or badly-fitting glasses. An *oculist* should be consulted; an optician won't do.

Bad ventilation—sleeping in close, dark rooms with little or no access to outer air—very often gives rise to protracted and severe headaches.

Grief and worry may very naturally cause obstinate headaches. People of hot temper and irritable disposition are seldom free from it. Hot water with half teaspoonful of cooking soda every hour most likely relieves it. Keep your temper!

Too heavy or tight clothing can occasion severe headaches.

Sick headaches are usually caused by some form of indigestion, for which a skilled physician had best be consulted.

Headaches of "plain drunks," as the police stations term it, are best disposed of by small doses of salts in hot water frequently repeated. If very faint, a little red-pepper may be added. But you're a fool if you do it again!

In many cases the most obstinate and violent headaches have been occasioned by tumors growing and pressing upon the brain. Medicines in such cases can only be palliative—nothing short of an operation and removal of the tumor (where this procedure is feasible) can effect a cure.

RUDY'S PILE SUPPOSITORY

Is guaranteed to cure Piles and Constipation, or money refunded. 50 cents per box. Send two stamps for circular and free Sample to MARTIN RUDY, Registered Pharmacist, Lancaster, Pa. NO POSTALS ANSWERED. For sale by all first-class druggists everywhere. Peter Van Schaack & Sons, Robt. Stevenson & Co., Morrison, Plummer & Co., and Lord, Owen & Co., Wholesale Agents, Chicago, Ills.

Please mention the Bee Journal Nov15

"Northern Bred Queens"

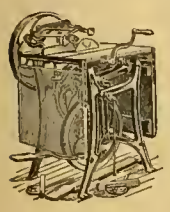
Our Northern Bred Gray Carniolans and Golden Italian Queens Produce Hardy Bees that Winter Successfully.

We make Queen-Rearing a Specialty. We never saw Foul Brood or Bee-Paralysis.

Don't fail to send for **Our Free Descriptive Price-List.**

Our Prices Are Away DOWN

F. A. LOCKHART & CO.,
17D LAKE GEORGE, N. Y.
Mention the American Bee Journal.



ONE MAN WITH THE **UNION** COMBINATION SAW

Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing, Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery. Sold on Trial. Catalogue Free.

SENECA FALLS MFG. CO.,
46 Water St., SENECA FALLS, N. Y
25D12 *Mention the American Bee Journal.*

Write to Wm. H. Bright—

For prices on all Improved Bee-Fixtures—

Hives, Sections, Comb Foundation, Brood-Frames, Extractors, etc.,

At Bottom Prices.

Golden Italian Queens $1.00 each. Free Price-List.

Wm. H. Bright, Mazeppa, Minn.
19Dtf Please mention the Bee Journal.

BERKSHIRE, Chester White, Jersey Red and Poland China PIGS. Jersey, Guernsey and Holstein Cattle. Thoroughbred Sheep. Fancy Poultry. Hunting and House Dogs. Catalogue.

S. W. SMITH, Cochranville, Chester Co., Penna.
13D26 *Mention the American Bee Journal.*

The Adels—A New Strain of Bees

Friends, I shall be prepared to fill orders for **Adel** and **Italian Queens** June 1. Try them Warranted, $1; Tested, $1.50; Select Tes., $2.
23C **Joseph Erway, Havana, N. Y.**
Mention the American Bee Journal.

Illustrated Home Journal 50 CENTS A YEAR

Interesting Monthly for **The Family and Fireside**

Welcome in every Home.

Large Premiums for Clubs.

Sample Copy sent Free.

THOMAS G. NEWMAN,
147 South Western Ave.,
CHICAGO, - - ILLS.

Orange-Blossom, Alfalfa or Sage

HONEY

For Sale Cheap.

15Dtf **C. W. Dayton, Florence, Calif.**
Mention the American Bee Journal.

Barnes' Foot-Power Machinery.

Read what J. I. PARENT, of CHARLTON, N. Y., says—"We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will. Catalogue and Price-List Free.

Address, W. F. & JOHN BARNES,
45Ctf No. 995 Ruby St., Rockford, Ill.
Mention the American Bee Journal.

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

T Supers or Section-Holders?

Query 974.—Which are better, T supers, or wide frames without top-bars, called "section-holders?"—Iowa.

E. France—I don't know.

J. M. Hambaugh—I don't know.

B. Taylor—I like T supers best.

Jas. A. Stone—I do not like either.

Dr. C. C. Miller—I like T supers better.

W. R. Graham—I prefer section-holders.

Eugene Secor—I use both, and like both.

R. L. Taylor—Neither. I would not use either.

Mrs. L. Harrison—I've no experience with either.

W. G. Larrabee—I think I should prefer T supers.

Mrs. J. N. Heater—I give preference to the T super.

Rev. M. Mahin—As I do not use either, I do not know.

Allen Pringle—Both inferior. I want wide-frames *with* top-bars.

C. H. Dibbern—I should prefer the section-holders with movable tops.

Chas. Dadant & Son—We would recommend T supers or section-crates.

Wm. M. Barnum—The T super. Wide-frames are an abomination in the land.

Rev. Emerson T. Abbott—I do not know. I have no use for either of them.

P. H. Elwood—I haven't used T supers, and wouldn't like to decide. Both are good.

H. D. Cutting—The section-holders may be a good arrangement, but I prefer a good T super.

Dr. J. P. H. Brown—I should prefer a section-crate or holder embracing the principle of the T supers.

Prof. A. J. Cook—I do not know. All depends upon which are most easily manipulated. Both are good.

G. M. Doolittle—I use wide-frames with top-bars, and consider them better than either of those mentioned.

J. E. Pond—There is some difference of opinion in regard to this matter, but I judge the evidence favors the T. I should not, however, throw away broad-frames, if I was fully supplied, for the purpose of using T supers in their place.

G. W. Demaree—I dumped into the waste corner—a sort of Valley of Hinnom"—a great lot of "section-holders," ten years ago. I use the T section-case because it is the cleanest and most simple section-holder I have any knowledge of.

Ready to Mail!

☞ Untested Italian Queens are now ready to mail. Price, $1.00 each; six for $5.00; twelve for $9.00.

T. R. CANADY,
23A5t FALLBROOK, CALIF.
Mention the American Bee Journal.

DAVIS-JOHNSON CO.
WESTERN AGENTS H.P.M'F'G. CO.
45 E. JACKSON ST.
CHICAGO.

FOOLISH MAN? Yes, but not more than you if you neglect your interests in carcing for your Apples. **CIDER** rays when you make it with the Hydraulic press. Saves time money and fatigue. Makes more and better Cider easier and quicker. Write for Catalogue of Cider, Fruit Machinery, Spray Pumps, etc. Address as above.

15D13 *Mention the American Bee Journal.*

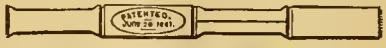
SMOKERS : KNIVES

Send for Circulars and Prices, to

T. F. BINGHAM, ABRONIA, MICH.
23Atf Please mention the Bee Journal.

DO NOT ORDER UNTIL YOU HAVE WRITTEN US FOR PRICES ON

The "Boss" One-Piece Section



Also D. T. Hives, Shipping-Crates and Other Supplies.

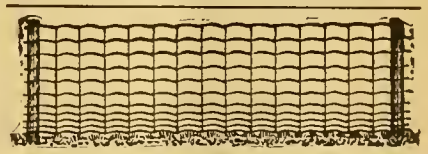
We have completed a large addition to our Factory, which doubles our floor room; we are therefore in better shape than ever to fill orders on short notice. **Send for Price-List**

J. FORNCROOK,
WATERTOWN, Jeff. Co., WIS., Jan. 1st, 1894.

1895 SAVE MONEY 1895

If you want first-class *FOR BUSINESS,* **ITALIAN QUEENS** **Foundation** at Wholesale Prices. **Hives,** suited for the South, or **SUPPLIES,** send for Price-List—to

J. P. H. BROWN, AUGUSTA, —GA.—
10A13t *Mention the American Bee Journal.*



Don't Put a Tramp in Charge.

If obliged to employ one, give him a position where it will not harm you if he "goes wrong." Many farmers have lost heavily trying to save money on wages, so also on wire fences. Soft wire is **CHEAP** but non-elastic. It appears to work well while you are watching it, but when your back is turned it gives you the slip. It is safer to require references, and the best in the world are furnished by the

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Mention the American Bee Journal.

For Bee-Hives and Supplies.

Catalogue Free on Application.

W. H. PUTNAM,
21A4t RIVER FALLS, Pierce Co., WIS.
Mention the American Bee Journal

SAVE MONEY ! !

It is always economy to buy the best, especially when the best cost no more than something not half so good. OUR FALCON SECTIONS are acknowledged to be superior to any on the market. The same is also true of our HIVES and BEE-KEEPERS' SUPPLIES, of which we make all modern styles. OUR PRICES will be found as low as those of any of our competitors, and in many cases lower, and you are always sure of getting first-class goods. We also publish THE AMERICAN BEE-KEEPER, a monthly magazine (Fifth year) at 50c. a year, invaluable to beginners. Large illustrated catalogue and price-list free. Address,

THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.

☞ **W. M. Gerrish**, of **East Nottingham, N. H.**, is our Eastern agent. New England customers may save freight by purchasing of him.

Mention the American Bee Journal.

GOLDEN QUEENS

From Texas. My Bees are bred **For Business,** as well as for **Beauty** and **Gentleness.**

☞ Safe arrival and reasonable satisfaction guaranteed. Write for Price-List.

Untested, 75c—Warranted, $1.

J. D. GIVENS, LISBON, Box 3 **TEX.**

10A26 *Mention the American Bee Journal.*

I ARISE

TO SAY to the resders of the BEE JOURNAL that **DOOLITTLE** has concluded to sell —BEES and QUEENS— in their season, during 1895, at the following prices :

One Colony of Italians on 9 Gallup frames, in light shipping-box	$7 00
Five Colonies.....	30 00
Ten Colonies.....	50 00
1 untested queen.	1 00
6 " queens	5 50
12 " "	10 00
1 tested Queen...	$1 50
3 " Queens .	4 00
1 select tested queen	2 00
3 " " Queens	5 00
Select tested queen, previous season's rearing..	4 00
Extra Selected for breeding, THE VERY BEST..	6 00
About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.	

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☞ Circular free, giving full particulars regarding the Bees and each class of Queens.

Address

G. M. DOOLITTLE,

12A25t BORODINO, Onon. Co., N. Y.

MUTH'S HONEY EXTRACTOR

PERFECTION Cold-Blast Smokers,

Square Glass Honey Jars, Etc.

For Circulars, apply to CHAS. F. MUTH & SON. Cor. Freeman & Central Aves., Cincinnati, O. Send 10c for Practical Hints to Bee-Keepers.

Mention the American Bee Journal.

GLOBE BEE-VEIL

By Mail for $1.00.

A center rivet holds 5 spring-steel cross-bars like a globe to support the bobinet Veil. These button to a neat brass neck-band, holding it firmly.

It is easily put together; no trouble to put on, or take off. An absolute protection against any insect that flies. Will go over any ordinary sized hat; can be worn in bed without discomfort; fits any head; does not obstruct the vision; folds compactly, and can be carried in the pocket; in short, it is invaluable to any one whom flies bother, mosquitos bite, or bees sting.

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

Abbott's Space.

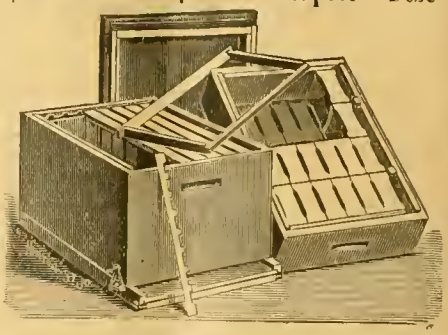
Better Than Testimonials !

Five St. Joe Hives, 1½-Story, for $3.50

Only one crate of five hives at this price to new customers to let them see the best hive made. Do not write, but send on the cash (no private checks taken), and the hives will go the same day. Good only while this ad. appears in this space. **Satisfaction Guaranteed.**

Emerson T. Abbott,
ST. JOSEPH, MO.

Latest—Simplest—Cheapest—Best



The "St. Joe" Hive.

10 Weeks for 10 Cts. : A Trial Trip of this Journal

Will be sent to any one not now a subscriber. You can sign Blank below and euclose this whole page with your 10 cts. (stamps or silver), if you wish.

Please cut out this whole ad. and sign and mail it to— 56 Fifth Ave., Chicago, Ill.

☞ Please send to me the AMERICAN BEE JOURNAL for 3 months (13 numbers). At the end of that time I will send $1.00 for a year's subscription, or 25 cts. in case I decide to discontinue. You will please address me thus:

The AMERICAN Bee Journal — ESTABLISHED IN 1861 — OLDEST BEE-PAPER IN AMERICA

Name.....

Post-Office..... *State*.....

17 YEARS AGO DADANT'S FOUNDATION

Was first offered for sale. The following parties keep it in stock and have kept it for years for sale. Why? Because they want to handle only the best goods, and they say they get the best goods when they buy Dadant's Foundation.

Thomas G. Newman, Chicago, Ills.
C. F. Muth & Son, Cincinnati, Ohio
Chas. H. Green, Waukesha, Wis.
Chas. Hertel, Freeburg, Ills.
E. Kretchmer, Red Oak, Iowa.
Jos. Nysewander, Des Moines, Iowa.
G. B. Lewis Co., Watertown, Wis.
James Reynolds Elevator Co., Poughkeepsie, N Y.
Page & Lyon, New London, Wis.
La. Bee-Keepers' Supply Co., Donaldsonville, La.
E. F. Quigley, Unionville, Mo.
G. K. Hubbard, Fort Wayne, Ind.
L. Hanssen, Davenport, Iowa.
C. Theilmann, Theilmanton, Minn.
E. C. Eaglesfield, Berlin, Wis.
Walter S. Pouder, Indianapolis, Ind
E. T. Abbott, St. Joseph, Mo.
J. M. Jenkins, Wetumpka, Alabama
John Rey, East Saginaw, Mich.
J. W. Bittenbender, Knoxville, Iowa.
Vickery Bros., Evansville, Ind.
Mrs. Jennie Atchley, Beeville, Texas.

Is not such a steady trade a proof of real merit in the goods we sell ?
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THE OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS

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Contributed Articles.

On Important Apiarian Subjects.

Operating and Operation of Bee-Escapes.

BY C. W. DAYTON.

The past season [1894] I used four different kinds of escapes in removing 6,000 pounds of comb and extracted honey. Also several colonies were kept busy going through escapes from May to October, and it has become my opinion that the escapes so far brought to notice are no more than stepping-stones to the finally perfected implement.

That escapes are an advantage is not theory with me, for throughout the season of 1894 I kept an apiary of over 100 colonies within 54 feet of a much traveled highway to the city of Los Angeles. To open a hive and brush bees from the combs of one colony would send angry bees after teams and people to an extent as to block the passage. Escapes, on the other hand, prevented a single molestation, and where the presence of bees were looked upon as a terror, a friendly disposition was gained for them.

In experimenting with escapes the bees of some colonies go out sooner than others. And the stampeding disposition was discovered, and can be demonstrated as a fact in three hours' time.

In using the Porter escape I began to study into the reason for having the channel of double bee-space depth. Then after a bee gets down into the channel and is about to proceed toward the springs, it must ascend an elevation in the floor. Under the elevated portion is an opening as if prepared for the deception of bees seeking a route to get back into the super. At the side of the elevated portion of the floor are openings as if to admit the passage of air. This elevated portion is a hindrance to stampeding bees. Then the round entrance to the channel has a wide, downward projection that would be sure to interfere with the passage of bees crowding through the channel.

As a rule, the first bees to try the springs seldom go through until they return to inspect every other part of the escape and escape-board. They don't want to go out of the super, but the depth of the rear part of the channel and flanged aperture prevents their going back into the super, and they are consequently forced to travel onward through the springs. The number of bees trapped thus are a very small number compared to the whole super full. They are of a meddlesome disposition, and do not know that they are separated from the queen. To construct a trap for these is impractical. After awhile a few of the clustered bees come down upon the escape-board. They do not become meddlesome or vicious, but search diligently for an exit. Whether it is these bees or the first mentioned which nibble at the joints of the escape-board and super, I am uncertain. I shall make an effort to find out as soon as the next honey season opens. As soon as one of these earnest bees discovers the way to the brood-nest it fans. Other earnest bees are attracted, and form in lines of rapidly increasing number.

Often have I held the Porter escape in my hands and wished for an explanation of every turn which its construction involved. It was the failure of the Porters to do this which caused my experimenting and philosophizing, and I produced the Stampede, not to sell and use, but to illustrate the principle of a wider exit and going-toward-the-light. This going-toward-the-light is a very valuable idea when properly applied. It is by the use of light that I hope to stop the gnawing of the bees at the joints of the hives. And it is because of this gnawing which calls into necessity more than one escape to the board. For example, if the escape is adjusted in one edge of the escape-board—say, in the front edge—there may be so many bees clustered below the combs that light through the escape cannot shine to all parts of it. This would cause

Hon. Christopher Grimm.—See page 380.

those bees distant from that light to attack crevices nearest to them.

I believe the perfected escape will admit light and contain a trap, which trap may be a spring, but there will be no enclosed channel. When bees proceed in a horizontal direction, turn an angle, and then continue their journey to reach the brood-chamber, energy is wasted to an equal extent that draft is wasted by an elbow in a pipe to the stove.

Florence, Calif.

How to Prevent Swarming.

BY JOHN WELCH, JR.

To the apiarist whose chief object is the production of honey, the prevention of increase by natural swarming becomes a serious problem, which is not satisfactorily solved by

many. The numerous members of the bee-keeping fraternity practice various plans to accomplish their ends in this respect, such as removing or caging the queen, cutting out queen-cells, using entrance-guards or queen-traps, extracting, or giving surplus room above.

Where I run for comb honey alone, I have attained very fair success along this line, by keeping myself well posted concerning the condition of the colonies, and whenever I find one whose brood-chamber is getting nearly full (and this the experienced bee-keeper is enabled to tell at a glance on opening the hive, by observing that the bees have begun to whiten and bulge the combs at the top-bars), I put on a super at once, and put in it two or three partly-filled sections to entice the bees to go to work above, which it will usually do at once if there is a sufficient flow of nectar. If I observe that the bees are still hampered for room, then put on another, putting it beneath the first, which should now be partly filled. Give the bees just room enough, and then entice them to go to work above, and you have accomplished your object, and thereby increased your profits and abated the swarming-fever.

In addition to the above, if it is at a time of the year when the young bees reared would mature at a time to assist in gathering some particular honey-flow, I remove the outside frames, which are usually filled with honey only, and slip in the middle of the colony a couple of frames filled with full sheets of foundation; this will give the bees and queen more room and work for awhile.

But it is my opinion, to get at the matter aright, so as to obtain the best results, it becomes necessary for us to go further back, and see that we have got a strain of bees whose energies are spent on honey-gathering, more than on increase alone. There is without doubt a vast difference in various strains of bees in this respect; while some with a vim are gathering in from field and wood, the various sweets which they can find, others with equal energy are bent on increasing their numbers more than their stores, and consequently when winter comes, they find that they have swarmed the harvest-time away, so to speak, and are without stores for winter.

We should breed only from those queens whose colonies approach nearest our ideal of perfection, considering in their proper order the qualities of hardiness, honey-gathering, gentleness and beauty.

The qualities of different strains of bees are as diverse as those of different people, and the intelligent and wide-awake bee-keeper keeps an eye on this point in selecting his breeders.

Frost, Ohio.

Hints for Extracting-Time.

BY A. C. SANFORD.

The season for extracting honey in this locality usually commences the first part of July, and sometimes lasts until late in August, but seldom. About the first of July the combs should be all extracted clean, because after the first of July the bees will gather white honey, but previous to that time they will work on all sorts of flowers. Dogwood, sumac and clover are the principal sources; dandelion sometimes furnishes considerable nectar. The basswood bloom is the main reliance in this locality, yielding more than all others, and of an excellent quality, the extracted honey being as clear as syrup made from granulated sugar, and, when granulated, is white as milk.

The way I proceed: The hive I prefer is one with about 10 Langstroth frames, or its equivalent, and will admit of being piled one upon another at will. Commence in the spring and add stories to the hives as the bees are able to occupy. Let the queen roam at will until about the first of July, or when you have bees enough reared to harvest the crop, then confine her to the lower apartment and place an excluder over to keep her in the brood apartment. Unless this is done, when you put freshly-extracted combs on, she will immediately fill them with eggs (which we do not want at that season); also the bees will carry the honey up, and at the end of the season the lower story will not contain enough honey to winter the bees.

To get the honey away from the bees the tools necessary are, a good smoker, a whisk broom, bee-veil, pocket-knife, and I use a tool made by riveting a sickle section to a flat piece of iron about ¾ inch wide by 12 inches long. Grind the back end of the section, rivet it to the iron for a handle, sharpen the end of the iron somewhat to pry the frames loose with. This is a very handy tool to use about the apiary. I use not very rotten maple wood for fuel in the smoker—it needs to be just a little damp, or somewhat so, to produce a good volume of smoke.

The morning, or early part of the day, is the best time to take away extracted honey, as there is apt to be less thin honey in at that time. Blow a few puffs of smoke in the entrance, two or three raps on the hive, a couple more puffs of smoke at the entrance, then carefully pry off the top, blowing in smoke at the same time. Smoke the bees some between the frames, push to one side drawn combs, and if the bees are not subdued, they will let you know it. Always hold the combs perpendicularly, shake the bees off in front of the hive—a succession of short jerks will do the work usually, although some Italians stick pretty tight. Brush off the remaining bees with a whisk brush. Have a wheelbarrow ready at your rear, with comb boxes and empty combs to replace the ones taken out.

The first time extracting I put on a queen-excluder above the first story. If you find combs with unsealed larvæ, put them below, or do not extract them until next time. Two persons can work to advantage—one to operate with the bees, and one in the honey-room.

It is better to extract each variety of honey by itself, if possible, but it is not always possible, for the bees will persist in working on sumac when we would like clover honey. I prefer to do the extracting in its season, as soon as it is fit. One must be guided by the thickness of the honey—it should be left with the bees until ripe enough to keep. I believe all bee-keepers should be very particular about this, in order to be able to have a reliable article. If honey is extracted while raw, or very thin, it will soon take a rank, strong taste, and really is not worth over half price.

I notice that some apiarists recommend adding new stories to the hives until the end of the season, and then extract, but there are some objections to this method. The honey certainly will be fully ripe, and have a good body, but my experience is that such honey does not extract as readily (sometimes with difficulty). Then, I want to keep each variety of honey separate, as much as I can. On our own farms we certainly would not want to thresh our wheat, oats, barley, rye and clover and timothy seed in a mass. Then, it takes so many extra hives and combs to put two, three, or four on each hive. Of course, these have all to be cared for when not in use—the moth and the mouse are ever ready to destroy them.

In the honey-room a good extractor is necessary, a honey-knife, draining-can, and a straining barrel or tank. I use a large barrel with cheese-cloth over the top, and a large gate in the bottom to draw honey off. All the gates used should be of large size, as the small ones are a nuisance. Cut the cappings off smoothly, put in the extractor, turn moderately; if the combs are very heavy, only part should be extracted before reversing. It pays to be as careful as possible with the combs, as it takes the bees some time to repair damages.

I would say right here that it always pays to be clean about everything. Have some water on hand and a cloth. If I get a little honey on my hands, or where it should not be, I clean it up. I can work a whole day and get stuck up but very little. I have had hands to work for me that did lots of work, but when night came the floor and everything was all stuck up. You all can readily see that honey isn't the stuff to smear your boots with, or to anoint your head with, but nice, clean honey is all right in the mouth, especially with bread and warm biscuits.

Ono, Wis.

What Dr. Miller Thinks.

MEMORIAL DAY.—That first page of the American Bee Journal for May 30 keeps fresh in memory the events of 30 and more years ago; but the two songs on the same page leave one a little doubt whether the "Old Reliable" is federal or confederate. Probably, however, the thought now is of a united nation with no North or South, or rather an undivided North and South.

BEES AND STRAWBERRIES.—I think that so far as the testimony goes at present, the verdict must be given that Bro. Secor has established his point that bees seldom work on strawberry blossoms. If, however, there is testimony to be offered on the other side, to the effect that some one has actually seen bees busily at work on strawberry blossoms, it ought to be promptly brought forth. I think Bro. Secor would rather enjoy being beaten in this case, and I'm sure I'd enjoy his defeat.

LARGE VS. SMALL HIVES.—G. W. McGuire [page 343] gives some strong testimony in favor of large hives, and cer-

tainly it looks that they are the right thing for him. But then some one will arise next and show that small hives are away ahead. I very much doubt whether any amount of controversy, possibly whether any amount of experimenting, will ever definitely settle the question so that one can make the broad statement that one or the other is best in all cases. But much that has been useful has been brought out in the discussion, and for one I should be sorry to see the discussion closed. I think one thing is shown to be true, and that is that in many cases more room has been needed than supposed. And it looks also a little more than it did, that what is true in one case may not be true in another.

Doolittle's Old Man.—"I arise" to a point of order. I move, that that man Bevins be put out. On page 344 he pretends to commiserate Doolittle's old man, but after studying the matter over, and taking a long look at the picture on page 356, I cannot resist the impression that Mr. Bevins is making fun of him. He says he is "handsome-visaged, well-proportioned." I'll not deny the "handsome-visaged," but as to the "proportioned," he's quite too short for his thickness, or else too thick for his shortness. He says, too, that he has "a persuasive, expectant look." "Persuasive" certainly, very persuasive—his very hands are eloquent with persuasiveness, but the droop in his mouth shows that expectancy is dying out, and despair setting in.

Instruction for Beginners.—Beginners certainly cannot complain that nothing in the American Bee Journal is intended for them. If they did, the lack is now being supplied by Dr. Brown in the "Southern Department;" and Northern beginners will find what he says well suited to their needs, and well said.

Color of Bee-Keepers' Clothing.—That idea Dr. Brown gives, that red is especially obnoxious to bees, is new to me. I know that white is ever so much better than black for bee-keepers' clothing, but I never had experience with colors. Red takes black in a photograph, doesn't it? Has that anything to do with the case? I suppose white is the best, and everything wooly or hairy should be avoided.

Giant Bee of India.—I wouldn't like to discourage anything looking to improvement, but so long as all the testimony regarding Apis dorsata is of such a discouraging character, it would be well to limit investigations to inquiries that would cost very little. If Apis dorsata can be domesticated at all, it could be done more easily nearer its own home. If the government is willing to do anything for bee-keepers, let it be something that is more sure to be of benefit, such as that suggested by the editor on page 349.

How to Tell Robbers.—It may be a little dangerous to get in between Messrs. Abbott and Heddon, on page 350, but a suggestion might do no harm. The beginner who cannot tell a blue heron from a smoked herring might make a sure thing of telling whether a bee brings honey out of a hive by the simple process of catching the bee and tearing it apart. If he is of a very humane turn he might catch it, squeeze gently the abdomen to see whether honey will be ejected by the mouth. I don't vouch for the last plan only by hearsay, for I always kill the bee before examining.

Marengo, Ill.

Spacing-Tacks on Frames—Other Things.

J. M. MOORE.

I notice on page 317 Gleaner's remarks on my former communication concerning spacing-tacks, and also his request for further explanation concerning the absence of burr and brace combs in the hives in which I have used the above-mentioned device. As I had no motive in writing on this subject other than to make known a simple device that had contributed to make the work among the bees more pleasant to me, and if I judge by their actions, less obnoxious to the bees, I cannot do better than to write a description of my hives and my management of the same, and let some other contributors with more experience, if they think it worth their while, tell wherein lies the cause of burr and brace combs in the one kind of hive, and their almost entire absence in the other.

I had in operation in 1894 three dovetail hives, two of which contained eight V-edge Hoffman frames, and the third had 10 frames of the same make. I had a follower in each, but they were not keyed up, as no key came with my hives, and I had used them one year before I learned that keying the brood-nest was recommended. Those three hives were full of brace-combs half way down the combs, and each had more or less burr-combs—one was so bad I had to pry the section-holders loose from the brood-frames when taking off the surplus.

I had five colonies in hives containing nine frames 10¾x13⅝ inches, inside measure, with top-bar ⅞x⅜ inch thick, end and bottom bars ⅞ wide, spaced ⅜ inch between top-bars, with spacing-tacks mentioned on page 286. While there were a few brace-combs between the top-bars there were none lower down between the combs, and in most of the five hives they are entirely absent; but it is not in this alone that I claim the greatest advantage for the spacing-tacks, but in the rapidity with which I can handle those frames, and the quietness of the bees while doing so. Perhaps I have not acquired the right knack of handling the Hoffman frames, but I am unable, with the greatest care, to pry them apart without some of them coming apart with a jerk, to be answered by several bees flying viciously in my face and at my hands, and frequently using their stings on the latter; while I can take hold of the frames spaced with tacks and lift them out so quietly that the bees scarcely ever become excited.

I note what Gleaner says about frames moving lengthwise so the heads of the tacks would not touch exactly in the center, thus making uneven spacing. Well, I have just made careful measurements in my empty hives thus spaced, moving the frames back and forth endwise as much as the hive would permit, but could detect no variation in the spacing.

I also note what he says about a nail being better than the tacks. Well, some time after I visited Mr. Smith's apiary I wrote him, to learn if I could procure the tacks of him, as I could not find any in the stores with heads large enough to give ⅜ spacing, and he answered that he was then using a small wire-nail, owing to the difficulty of getting tacks of the proper size, which he said answered as well as the tacks; but as I feared that the nail might get bent, or driven in too far, I procured a hollow belt-punch, and cut a washer out of pasteboard to increase the size of the heads.

I also note with pleasure what Gleaner says about ¼ inch being better between top-bars. As I intend to experiment in that direction the coming season, would Gleaner kindly give me his opinion as to the feasibility of ¼ inch spaces between my ⅞ inch width top-bars. The assurance from such an authority, that it would work, at this season, would be worth many times the price of the Bee Journal.

This is my third season in bee-keeping. In the spring of 1894 I had two colonies, and lost one the previous winter. I increased to eight, and took 80 pounds of comb honey. My bees are stronger to-day than they were last year in the middle of June, all having come through the past severe winter, but one colony was queenless, which I united with another that had become somewhat weakened by dysentery. I winter my bees on the summer stands, and can notice no difference in the strength of the colonies on my deep or shallow frames. The colonies in the single-walled dovetail hives, with winter case were certainly drier than those on the deep frames in hives with lower story packed in one inch of chaff, with single bottom-board and single upper story, and 3-inch sawdust cushion on top. The one-inch space between the dovetail hive and winter case was packed with sawdust, and a two-inch sawdust cushion on top. The thermometer ranged from 20° to 28° below zero for about three weeks.

An Sable, Mich., May 20.

Reasons for Preferring the 8-Frame Hive.

BY C. DAVENPORT.

I prefer the 8-frame size of hive, but I am a specialist—that is, I make a living (such as it is) by producing honey; and from quite large and extensive experience I know I can make more money with a large number of frames in 8-frame hives than I can with the same number in 10 or 12 frame hives. But in order to do so it is necessary to feed in some seasons in order to keep brood-rearing up. I employ a man for each yard the entire season. These are cheap men; that is, one of them who has been with me for a number of seasons, is a man who has one wooden leg; another is a man who is not able to do a hard day's work. But they can feed bees all right.

I believe the majority of bee-keepers, though, keep bees as a side-issue only, and many of these do not wish, or have not time, to do much feeding in the spring and early summer, if necessary. For this class, as a general thing, I think the 10-frame hive the best; for the honey those two extra combs will contain, will, in a poor season, enable brood-rearing to be

kept up much better than it would be with only 8. If no feeding were done, and if a flow did come, the colony on 10 frames would have a much larger force of workers to secure it; but when I have gone beyond 10 frames, in general I have got just that much less surplus—that is, with a 12-frame hive I do not get as much surplus within 14 or 16 pounds; and, besides, such hives cost more, and it is much harder work to handle them.

I do not think the locality makes much difference to the specialist about the right size of hive. Of course, it might make a difference as to the time, and amount to be fed. I believe I can make more in any locality with frames in the 8-frame hive than I can with the same number of frames in larger ones; for my evperience has been that, as a general thing, 8 frames are enough for the best queens we can get at the present time. In saying "the best queens," I do not mean those that are the most prolific. I have had queens that would keep 10, and in a few cases even 12, frames full of brood; but these queens needed to be prolific, for their bees were so short-lived that these colonies could not store as much surplus as others whose queens did not keep 8 frames full.

Again, I have had very prolific queens whose bees lived long enough; but they were worthless so far as surplus honey was concerned, for their entire time and attention seemed to be devoted to rearing bees, and swarming.

Sometimes we see reports of queens that will keep 12, or even 14, frames full of brood, and their bees store a large surplus. I have had two or three such queens; but they are very rare, and hard to get; and if we could get them, would they be any better? Suppose we had queens that would lay as much as two of the very best ones we now have: could we get any more surplus for the same number of workers, or per frame, than we now do? I do not believe we could, from my experience. I believe that, after a colony gets to a certain strength—a strength with the right kind of queen—the 8-frame hive gives ample room to develop, and they will store as much or more for the same number of workers as one much larger; and I had much rather produce 200 pounds of honey in two 8-frame hives than I would in one 16-frame hive.

Some of the advocates of large hives tell us that bees in such hives will rear a good many more bees during the latter part of the season, and thus have more bees for winter; and that, such being the case, they will winter better and build up faster in the spring. I will admit that colonies in large hives of 12 or 14 frames will rear more bees at a time when there is nothing for them to do. This is why colonies in big hives do not store as much surplus. It takes a good deal of honey to rear and keep these extra bees over wioter—enough so that, in large apiaries, it would amount to $100 or more; and with me they generally die off in the spring before they have done much if any good. But I winter in cellars altogether. In out-door wintering it may be quite different, and the same may be true of deep frames. I have better success in wintering with bees on the standard frames than I do on those that are deeper.

The past winter was, for certain reasons, very hard on bees in this locality, whether they were in cellars or out-doors; and at present some of the strongest colonies that I have are in 8-frame dovetailed hives; and I have colonies in hives of many shapes, styles, and sizes—many more than I shall next year, if the present season proves a good one.—Gleanings.

Southern Minnesota.

California Prospects—Bee-Paralysis, Etc.

BY H. F. JOHANNING.

It seems to me the bee-keepers of Southern California must have had all the whim and enthusiasm taken out of them the last two or three years, or else that "stiff upper lip," which is generally predominant in California, is beginning to quiver, or possibly some of us are being somewhat cured of the old California style, which is—If you can't report grand achievements or glorious prospects for the future, keep quiet, don't say a word. Some of us, through sad experience, have found that it is better not to be too previous in heralding the glad tidings of future anticipations and prospects, although everything be favorable so far as we can see, for even in California, where any one can forecast the weather, there might be a change (as is the case this year) in the regular order of the atmosphere.

The weather had been very favorable until about April 20, this season: the early rains and the invigorating rays of our old friend Sol, started everything growing at least a month earlier than usual. I have lived in California nearly 12 years, and I have never seen a greater profusion and variety of flowers from about the middle of January up to date (May 2) than this year. The ground has been literally covered ever since—when one kind begins to fade and die another takes its place. It has been as the girl said, "Beautiful, grand, sublime." The rains and sunshine were so evenly distributed that had we ordered it so, it could not have been better, until the last two weeks it has been so foggy and rainy (scarcely giving the bees a chance to work or take a flight), and there is no telling when it is going to let up, for it is letting (yes, almost pouring) down at present. If it continues this way much longer, we won't be "in it" at all for honey. We are losing nearly all of the wild alfalfa honey, and the white sage is blossoming now, too (about a month earlier than usual); the black (or button) sage is past, and yielded a good flow where it abounds (very little in this locality), but the worst of all is that the bees are suffering severely (the stronger colonies) from what *we* formerly called the "trembles," because they come out of the hive (when the weather permits), stand around awhile, shake and tremble, then whirl around a few times, turn upside down, and—well, they don't tremble any longer. But we now call it "bee-paralysis," because all the bee-papers seem to adopt that name for the disease. Although *we* bee-keepers adopt the name, I for one do not adopt the causes and cures given by the bee-papers (or by their contributors).

I wish to say right here that I am not writing for fame, neither to dispute what any one has written on this subject; everybody has (or ought to have) an opinion of his or her own, and no one need take what I have to say on the subject for more than it was intended—an idea, a suggestion. I am no authority, only a novice in bee-keeping. I think there are several probable causes of this bee-paralysis, and those causes combined institute the trouble. Improper ventilation, unfavorable weather, scarcity of honey, too much pollen, etc.; the latter is the principal or chief cause, I thiuk. When the hive gets chock-full of bees, and no more ventilation is given, the air will be more or less contaminated, and the bees will begin to feel badly. The weather being disagreeable, the bees can't get out, and a scarcity of unsealed honey may induce them to eat (or feed to the young bees) more pollen than is good for their welfare; and the next thing will be a griping—no, not that, but constipation. Now, may be Drs. Miller and Brown can help us out of the dilemma, and give us a prescription, and about the amount for a dose per colony, and I think the trouble will soon end, any way in this locality, for one doctor has tried such a remedy with good results.

I have observed such sick bees for two seasons previous, have never lost but one colony with the disease, and am satisfied that pollen is the chief cause. I have never (to my knowledge) found a colony that had plenty of ventilation and uncapped honey, and a comparatively small amount of pollen, sick with that disease; neither have I found any of my colonies sick, that had swarmed early, and I always find that the sick colonies consume nearly all the pollen brought in; yet I may be mistaken, and do not wish to dispute what others have to say on the subject. It does not, however, always take a great and wise man to stumble over a straw.

I use the 8-frame Langstroth hive, and think its capacity about right for this locality, and to my idea, but for extracting I prefer a frame about three inches shorter, about the same depth, and then about 10 frames would make it good.

I have 70 colonies in pretty good condition, and about 10 weak ones. I don't care for increase, and would give a large button if I could entirely prevent it, and still keep them in working trim, but I can't do it; they'll either swarm or else loaf around the hive more or less.

I find that by spacing close, I prevent (or at least I think I do) braces between the combs.

I fully agree with Mr. Wallenmeyer, of Evansville, Ind., on the question of full sheets of foundation, and it isn't because I am an old Hoosier, either (when only a boy I was in an Indiana drug-store), but because I get nice, straight, full worker-combs, and not one-third drone. I had to pay for my experience, too.

Etiwanda, Calif.

[Why not give the remedy for bee-paralysis a trial as suggested by Messrs. Alderman & Roberts, on page 364? It may be the very thing. Try it, and then report results.—ED.]

That New Song—"Qneenie Jeanette"—which is being sung everywhere, we can send you for 40 cents, postpaid, or club it with the American Bee Journal for one year—both for only $1.10. Or, send us one new subscriber for a year (with $1.00), and we will mail you a copy of the song free.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

An Important Notice.

If any of the friends send questions and don't find answers to the same, the most probable reason is that I have not been told where auswers were desired. I like to be accommodating, but when you send a question and don't say whether you want the answer in the American Bee Journal, Stockman or where, how can I answer? So when you don't get any answer, if you haven't given me the right information in the first place, just send a card and tell me where you want the answer. No use to send any stamp.

To those who occasionally send a stamp and say they don't want any answer in print but by letter, I must regretfully say that I am so hard driven for time that the only course left for me is to leave such questions unanswered. Occasionally some one thinks that when a stamp is enclosed, that 2 cents entitles him to a dollar answer. A little reflection will show the unreasonableness of this. I always dread opening a letter that has a stamp in it.

Consult your own convenience as to whether you send your questions to the editor or directly to me, only when you have nothing else to write to the editor about, it may make a little quicker work to send direct to me. C. C. MILLER.

Dysentery Killed Them.

What killed my bees? About the middle of November, 1895, I put five colonies into the cellar, all seemingly in good condition with plenty of stores. About the middle of February I noticed they were spotting their hives badly. They seemed to be dwindling away fast after that; by March 15 they were all dead, with plenty of honey left. On opening the hives I found the bottom covered with dead bees and mold; also the combs and sides were moldy. There was nothing over the frames but the cover. Could I have done anything to have saved them? G. H. P.

Lake Villa, Ill.

ANSWER.—The trouble was dysentery. Very likely you might have done something for them by seeing to the temperature and ventilation of the cellar. A thorough airing out of the cellar is a good thing at any time, for you can't expect bees to live in good health if the air is foul. If the cellar was too cold, raising the temperature to 40 or 50°, and keeping it there would help. Possibly the hives themselves were too close, for no matter how pure the air may be in the cellar, if the hives are so close that the same air is too much confined in them, the pure air of the cellar does little good.

Questions About Patents and a Reward.

In the last number of the American Apiculturist [page 35] I read: "The sum of $50 will be paid to any one who will make an improvement on the queen-trap as now constructed."

Well, this day [May 22] I have made a great improvement on the trap. Please let me know whether I can get the improvement patented; or, in other words, can I get a patent on an improvement of another patent? Then let me know how I am to go about it to get the above reward.

J. C. K.

ANSWER.—You can patent an invention of your own that is an improvement on some other invention which is patented, and the man that had the original patent must get permission from you to use your patent. Equally, however, you must get permission from him if you use his patent. In other words, your patented improvement gives you no right to use the invention you have improved upon; so that there must be some sort of an arrangement between you, if your invention is such that it cannot be used independently.

With regard to getting the $50 reward—that's a private matter between you and the one offering the reward; or, in other words, simply a matter of purchase and sale—you deliver the goods, and he pays the money. But in this case there may be a question whether it was the intention to pay a reward for an improvement that should not go into the full possession of the one paying for the improvement, and I should hardly think you could patent the improvement and have full control of it, and still get the $50. For in that case, what would you give in exchange for the $50?

A Colorado Honey-Plant.

I mail you a sample of plant in bloom. It is the earliest bloom we have in wild flowers, and the bees work on it more than any other flowers we have. It grows in stools like alfalfa, from 25 to 400 or more stalks and flowers. It grows on white, thin land, and has a large white taproot. It needs no irrigation. The flowers last about 25 days. It comes in early, and is just the thing we need to start the bees in the spring. It is quite abundant along the highways and in pastures. Please give the name of it in the Bee Journal.

Bees are in fine condition in this locality, but no sale for honey. D. R.

Las Animas, Colo., April 30.

ANSWER.—The box and flowers were smashed in the mail, the latter being dried up, but I don't believe I could have told anything about it even if I had seen it growing, for I suspect it's some plant that belongs to that wonderful flora of yours that has never deigned to grow in this region. From your description it must be of much importance, and perhaps would flourish elsewhere. You ought to be able to find out about it by writing to the botanist at your agricultural college.

Spring Desertion—Secreting Beeswax.

1. On April 19 I moved my bees out of the cellar, and on the 20th three colonies deserted their hives, leaving plenty of honey and small patches of brood; also since, others have gone out of their hives in the same way, at different times up to the present date, May 26. Why do bees leave their hives?

2. On May 24 we found on the underside of the honey-boards on two hives what appeared to be rendered beeswax. I will send you a sample of it? Do bees make pure wax? or what is it? H. B.

Rossie, N. Y.

ANSWERS.—1. I suppose the trouble might be called "spring desertion," although that doesn't tell much about it. If bees run short of stores they desert, and are then called "hunger swarms." Sometimes it seems as if they desert because they have dwindled away in numbers, and haven't bees enough to properly cover the brood, although there is plenty of honey in the hive. Then, again, they desert when it seems there is no good excuse at all. One thing, however, I think you may always count on, and that is, that such desertion never takes place with good, strong colonies. Sometimes they desert, and then if forced to return they reform and live good lives afterward. That suggests the plan of confining the queen to the hive by means of a queen-excluder, for if the queen cannot leave the hive the bees may return and behave themselves.

2. The sample received seems to be beeswax, very nice and white. I have known my bees when fed continuously for a time to deposit pure white wax on the feeder—what for I don't know. It was put on just as propolis is daubed on. Probably yours is a case somewat similar. If you could get the bees to do that sort of thing regularly, and always produce as nice an article as the sample sent—a lump as big as a large pea—you might make some profit raising wax.

The Laying Queen Flew Away.

My bees came out of the cellar in fine condition, but when I opened one hive to see if they were all right, the queen flew away and did not return. So I united the colony with another, after a few days, as they destroyed their brood, and had no chance to rear a new queen. Is it a common occurrence for a queen to do so? Everything was in good condition in the hive, and there were eggs and larvæ in two combs. The rest of my bees are doing well, drones are flying, and queen-cells are quite numerous. M. W.

Nimrod, Minn., May 19.

ANSWER.—It certainly is unusual for a laying queen to fly away when the hive is opened, and unusual also for the bees to destroy their brood, or fail to start queen-cells. There seems something abnormal about the whole case.

What Caused the Bees to Die?

What is the matter with my bees? This morning I went to look at them and found lots of dead and dying bees on the ground. They would come out of the hive and alight on the ground and die. Lots coming back loaded with pollen would alight at the bee-entrance and go no further. It looked hard to see the ground covered with bees in such a short time, and no help for it. My three colonies were in the same condition. I opened some of the hives and found a nasty, dark brown, thick liquid in them—it looked to me as if they got something that poisoned them. I know of nothing that I can do to help them. They have been falling down all day, out of the air, and cannot fly again. If this keeps on for three or four days, I will have none left. I never saw a stronger lot of bees than they were Saturday, and on Sunday morning they were in bad condition. E. F.

Portland, Maine, May 25.

ANSWER.—The only thing I can think of is poison of some kind, and I can't suggest any remedy. It seems a very sad case. Please let us know the final outcome.

Canadian Beedom.

Conducted by "BEE-MASTER."

What Constitutes an Italian Queen, and a Purely-Mated Italian Queen?

These are questions that seem to engage the minds of many bee-keepers, owing, I believe, to the many discussions going on in several of our bee-papers, about this much-abused race of yellow bees. It is rather amusing to read the comments made by several editors of bee-papers. Take, for instance, those made by the editor of Gleanings. Scarcely a paper comes to hand but contains some comment, either original or copied from other journals, denouncing this yellow race of bees. If it is possible to have them banished from our land, some certainly are determined to leave no stone unturned to accomplish this end.

If those who are so keen to place barriers in the way of progress could rear and maintain the yellow race as easily as they can the hybrids they call "pure Italians," (because their worker progeny show three yellow bands) the yellow race would at once be accepted as the coming bee. The great difficulty in perpetuating the distinct characteristics makes this a hard matter with the rank and file of bee-keepers. It will continue to be so until yellow drones predominate to the extent that black drones now do. This may take half a century to accomplish. If the editors of some of our papers keep up the crusade as they have done in the past, we may bid farewell to the advancement of bee-culture on this line. We are glad to know, however, that all bee-keepers do not write for or edit bee-journals, but know a good thing when they see it.

As bee-keepers, we have been led to believe that the queen is the most potent factor in transmitting qualities, when we should have been taught to look to the drone. It is an ascertained fact that all breeders of thoroughbred stock who have risen to eminence admit the male to be the chief part of the herd. This is a subject of great interest, and wide scope, but will be confined in the present article to the observations of the writer, as it would take up too much space to go into the matter fully as to the origin of this race, and how color is produced. This may at some future date be done.

Before making an attempt to explain my views on this subject, let me draw your attention to the law of similarity. This is one of the plainest and most certain of the laws of Nature. Children resemble their parents, and they do so because this is hereditary. The law is constant within certain limits. Progeny always and everywhere resemble their parents. If this were not so, there would be no constancy of species. For in all time we find repeated, in the offspring, the instincts and all the general characteristics of the parents, and never those of another species. Such is the law of Nature, and hence the axiom, "Like produces like."

Now if we get what the generality of queen-breeders call a pure Italian queen, is there a similarity, or like producing like, in their progeny? According to the views of some who sell and breed queens, any kind of a queen that produces three-banded bees is recognized as being a pure Italian. That, in my opinion, is no proof whatever, as will be shown, but the prevalence of this idea shows how little interest is taken in the purity of our bees.

A pure queen is one that will duplicate herself in her drone progeny, whether black, gray or yellow. A pure black queen will always produce pure black drones and every one so. A pure Carniolan will produce the same caste as the mother, and a pure Italian will produce yellow drones—as yellow as the mother. How many, in getting pure Italian queens, find the drones as yellow as the queens, and every one so? I am afraid, if you look closely into this matter, the drones will be found a very mixed or mottled race. If that is the case, then you have not got a pure queen. Why? Because like produces like. Drones have no father, the queen having the power of parthenogenesis complete within herself as far as drone progeny is concerned. The drone progeny never becomes affected by the queen being fertilized, because the drone, when copulation takes place, discharges only one polar body, which is female, and therefore influences only the worker-bees. Any parties who assert to the contrary are ignorant of the facts of the case. Having disposed of this question, we come to a second, viz.:

What constitutes a purely-mated Italian queen? A purely-mated Italian queen will produce uniformly-marked workers, yellow to the tip, completely so on the under side of the abdomen, but the best proof is to produce queens from the worker-eggs of the previous queen, and if they produced perfectly yellow drones, that would be positive proof of their mother's purity, and also that she was purely mated. I know whereof I speak, and if you give one dash of pure black blood to a pure Italian queen, it will take 17 generations to breed it out again. In other words, 17 straight crosses of pure blood, and some of the drones would not be extra yellow at that. Some would show a little bronze on the last segment of the abdomen. At the 16th cross the workers will be perfect, but the drone progeny will show a percentage jet black, or nearly so, up to the 16th generation, showing conclusively that the characteristic of color is more indelible in the drone than the worker. If we want to improve our race of bees, and do so rapidly, we must look a little more to the drone than we have heretofore done, for the transmitting of characteristics.

This brings me to a third question: How can a queen or drone transmit instincts or characteristics that neither ever possessed? Color, disposition, and constitution no doubt are transmitted through both. Farther than this I cannot go without calling in the aid of a third party, which seems to me to play an important part in transmitting qualities, that is, the drones from laying workers. Having now in my possession the offspring of queens mated from that source, such queens, in my opinion, may not be so long lived as those mated by drones the offspring of fertilized queens; but there certainly is no difference in their offspring, to all appearance. They lay eggs just as good and plentiful as any other queen, and work as vigorously. Queens were superseded last season; had they been queens properly mated, that is to say, with drones from fertile queens, supersedure may have taken place the same. They survived long enough so that through their offspring the instincts and all the general characteristics of the parents were transmitted. There is no doubt we have this class of laying workers ever present. They were observed by the writer many years ago in extracting from the upper stories with queen-excluders. I found where drone-combs were used that often drone-brood was present. At first I thought the queen had been there, but close observation revealed the fact that it was the work of laying workers, a queen being in the brood-chamber. Seeing that such is the case, there is nothing surer than that they are ever present, and through their instrumentality habits, instincts, and all the general characteristics of bee-nature are transmitted, which neither queens nor drones—the offspring of queens ever possessed. It therefore becomes a necessity in the workers to be drone-layers, or how do they know how to build drone-cells, having inherited no such tact through mother, father or any predecessor, unless through their own male descendants? Thus the drones from laying workers are a potent factor in transmitting certain characteristics.

We see the best evidence of this in a young swarm becoming queenless. They have a perfect knowledge of their condition, constructing drone-cells only, and if allowed would fill them with drone eggs. Introduce a queen, fertile or unfertile, and the construction of drone-cells immediately ceases. Does not that look as if they were governed by reason? And, moreover, they as a rule select drone-cells to lay in, and seem to know their business better than an unfertile queen. They don't seem to realize their condition and lay promiscuously. Comparing the labors of a queen-wasp and a queen-bee, I am inclined to look upon a queen-bee as being a degradation.

Toronto, Ont. JOHN MCARTHUR.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

Two Queens in a Hive—Feeding the Queen.

DR. BROWN:—1. Have bees ever been known to tolerate more than one fertile queen in the same brood-nest at the same time?

2. Can queen-bees feed themselves independent of the worker-bees? I. S.

Long, W. Va.

ANSWERS.—1. Yes, sir; they frequently do under certain conditions. For instance, a queen is getting old, and the bees proceed to rear another to supersede her. This young fertile queen I have often seen on one side of the comb laying, and the old one on the opposite side engaged in the same act. The bees would seem to tolerate this upon the assumption that the old mother would soon be gone, and it is not worth while to hasten her departure.

2. Yes; but judging from their actions they much prefer being fed.

Bees Moving Eggs—One Instance.

At various times I have seen reference made in the American Bee Journal to the question of bees moving eggs. Some writers flatly deny that this has ever occurred, but I *know* of at least one instance where bees moved eggs from one comb to another, and I would not be surprised to at any time find a queenless colony rearing a queen from an egg stolen from a neighboring hive. This would not happen often, perhaps, for the reason that laying workers would generally interfere.

Early in the spring I had a colony become queenless. As soon as I noticed their condition I gave them a frame of brood from my breeding queen. They reared a queen, but she was lost at mating time, I suppose. By the time I discovered her loss, all brood had hatched. I gave them another comb containing eggs, and on examination a week later, I found several queen-cells on the comb I had given them, and two or three on each of the adjoining combs which were empty of brood, and contained but little honey. Some of these cells were on the outside of the combs. I suspected laying workers, but to make sure of this very matter of the moving of eggs, I cut one of the cells (after it was sealed) from the outside of one of these empty combs, put it in a West cell-protector, and placed it in a nucleus formed for the purpose. In due time a *queen*, in all respects, hatched from that cell. No laying workers developed in the old colony, as I could find no more eggs in any of the empty combs. This colony now has a fertile queen.

Holly Hill, Fla. C. S. HARRIS.

A Bunch of Kinks Reviewed.

That "Bunch of Very Short Kinks," on page 278, confirms the oft-repeated theory of the past, and conceded fact of the present, that experiences differ in different localities, and that that which is attended with success in one locality, would often prove a "dismal failure" elsewhere.

ANTS—GREAT SOUTHERN BEE-ENEMIES.

Mr. Scott's ant-preventive may keep them from "nesting under the cover," but the Southern bee-keeper is more interested in preventing them from destroying his bees. It is questionable if any bee-enemy in the South causes as much annoyance as do ants. To open a hive of bees that have fallen a prey to these merciless nocturnal marauders is a spectacle eminently calculated to incite the deepest sympathy for the industrious little victims, and a war of extermination against the invaders. The ants congregate by thousands at night around and over the hive, making their attack *ex abrupto*, biting off the legs and wings of the bees, thus disabling them, and with the advantage of their sting-proof armor and powerful jaws, the total destruction of a colony is but a short job, and the morning light reveals to the apiarist a writhing mass of helpless, living, dismembered bodies heaped upon the bottom-board..

In localities where, by the frequent visits of these pests, the vigilant apiarist has become familiar with the "cry," he readily recognizes their presence in an apiary by walking quietly through the yard at night. As he knows the satisfied hum of a hiving swarm, the contented hum in the hive at the close of a day's work, the piping of rival queens, the note of an angry bee, the hollow [?] hum of a queenless colony when disturbed by smoke, or the sound of a swarm in the air, so he knows the clearly-audible notes which emanate from a colony invaded by ants. It is like the hopeless cry for help, pathetic in tone of expression, and simultaneously arouses the sympathetic and punitive nature of the apiarist to the utmost. Oil or fire, or both, applied at their nest, I believe, is the only effectual, practical means to be employed in a large apiary, while the oiled string is no safeguard against destruction by ants, in any case.

CAPPING THAT HAS A WATERY APPEARANCE.

From the same "bunch:" "A queen whose bees cap the honey so it has a watery appearance should be superseded by one whose bees cap the honey white." If the queen is otherwise desirable, better give her colony an extracting "story," and furnish the one possessing superior comb honey traits with a super of sections. Possibly, by this management the former would prove more profitable than her proposed successor.

FIFTY OR ONE HUNDRED COLONIES—WHICH?

Mr. Scott's claim that 50 colonies well managed will make more money than 100 carelessly handled, may be a fact, but why not increase the revenue 100 per cent. by giving 100 the same care bestowed upon 50—as to care for 50 colonies "well" supposes the attention and watchful care of one person, while if so disposed, he could as "well" manage 150?

EQUALIZING THE STRENGTH OF COLONIES.

Again, we are advised that a good way to equalize the strength of colonies is to "move them around." Now, that wouldn't work here, either. The result of such a practice would be quite the reverse, for the percentage of loss would be greater with the weaker colonies than with the stronger ones, and while all would probably be weaker, they would not be made uniformly weak. "Gleaner" thinks that by the exchange, the weaker colony would gain. Perhaps it would, but the chances against it are numerous, especially if practiced at a time when honey is scarce in the field. Aside from the loss of workers resulting from their own warfare, nothing could be better designed to excite robbing.

New Smyrna, Fla. H. E. HILL.

Why Italian Bees are Preferable.

DR. BROWN:—I have an apiary of black bees which are very gentle. Do you think I could better myself by getting Italian queens? If so, what kind, leather-colored or golden? I want the *gentlest* and best regardless of color. Of course, I prefer the goldens, if they are as good. R. E. P.

Grifton, N. C.

ANSWER.—The Italians are preferable to the blacks, not only because they are better workers, but they are more easily handled; besides, better looking. The leather-colored I have found to average the best workers; for "beauty" I prefer the golden, and when bred for business they "score" well as honey-gatherers. Some of the yellow strains have Cyprian blood in them, which makes them vindictive and great swarmers—both objectionable qualities.

Honey as Food and Medicine.—A new and revised edition of this 32-page pamphlet is now issued. It has 5 blank pages on which to write or paste recipes taken from other sources. It is just what its name indicates, and should be liberally distributed among the people everywhere to create a demand for honey. It contains a number of recipes on the use of honey as food and as medicine, besides much other interesting and valuable information. Prices, postpaid, are: Single copy, 5 cts.; 10 copies 35 cts.; 50 for $1.50; 100 for $2.50. Better give them a trial. Send all orders to the Bee Journal office.

Only One Cent a Copy for copies of the American Bee Journal before Jan. 1, 1895. We have them running back for about 10 years. But you must let us select them, as we cannot furnish them in regular order, and probably not any particular copies. Just send us as many one-cent stamps as you may want old copies, and we will mail them to you.

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George W. York, - - Editor.

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Editorial Budget.

The First Number of the monthly Southland Queen has been received at this office. It has 26 pages in all, and is published by the Jennie Atchley Co.

The Kansas Bee Journal says this in its June issue: "So far, the only exchanges that are always on time are Gleanings and American Bee Journal. Some are only occasionals, and very late ones at that." Would the saying, "Better late than never," apply to some of the "occasionals?"

The Apiculturist for March, April and May is all in one number, I notice by two other bee-papers. It has not been received at this office as yet—June 6. Gleanings asks, "Is it a quarterly?" I should say yes, at least for once, and I see it reported that it "may be issued quarterly the remainder of the year." But isn't 75 cents a pretty big price for four numbers of the Apiculturist?

No "Straws" were found in Gleanings for June 1, so for once it was "all wheat." It was the first time since "Stray Straws" have been published, that the usual installment failed to arrive. Their absence must have been caused by an accidental delay or oversight. But may be Dr. Miller's "straw stack" melted down during the hot weather, and so he's out of straw(s) as well as out of sorts. Just for a change he might furnish some "good grain" instead of "catching at straws" and landing a bunch twice a month!

Bee-Keeping Not a Nuisance is the title of an 8-page pamphlet re-issued by the National Bee-Keepers' Union. It is a full history of the lawsuit between Mr. Z. A. Clark and the city of Arkadelphia, Ark., in 1887. Copies may be obtained free by addressing the General Manager, Thomas G. Newman, 147 South Western Ave., Chicago, Ill.

Mr. Newman, in the closing paragraph of the pamphlet, says:

This decision of the Supreme Court is a document that will become of great use as a *precedent*. It will be a guide for the rulings of judges—for the information of juries—and for the regulation of those who may dare to interfere with a respectable pursuit by law or otherwise.

Reduced Freight Rates.—Mr. J. T. Ripley, the gentlemanly chairman of the Western Classification Committee, upon my request, has kindly furnished the following information relating to the reduction of freight rates applied for on May 8, by Dr. Miller, as chairman of the committee appointed for the purpose by the North American Bee-Keepers' Association, at its last meeting:

CHICAGO, Ill., June 5, 1895.

MR. GEORGE W. YORK, Editor American Bee Journal.

Dear Sir:—Answering your favor of the 4th inst. At a late meeting of this Committee the following changes in classification on honey were agreed upon, viz.:

Honey, in comb, in boxes, with glass fronts, fronts not protected, now rated at two times first-class, was made first-class.

Extracted honey, now provided for in tin cans, boxed, and in kegs at second-class, was made fourth-class.

Extracted honey, in barrels, now provided for at third-class, was also made fourth-class.

Yours truly, J. T. RIPLEY, *Chairman.*

N. B.—I am advised that the Western Freight Association have made K. D. bee-hives and honey-box lumber ratable the same as lumber, taking effect June 1, 1895. The other changes referred to above take effect July 1, 1895.

J. T. R.

I think Dr. Miller should be congratulated by bee-keepers upon the success attending his efforts in this matter.

The Epworth Herald is the official organ of the Epworth League—the young people's society of the Methodist Episcopal Church—which now has a membership of over 1,000,000. The Herald, under the magnificent editorship of Dr. Joseph F. Berry (my personal and esteemed friend and neighbor) is now crowding the 100,000 mark. The issue for June 1 was a double (32-page) number, wonderfully rich in illustration and character of contents. Aside from its religious selections, it is a grand number for the general reader. I wish everybody could read it—young and old—whether Methodist or not. The yearly subscription price is $1.00—a remarkably small sum for such a fine weekly. Send 5 cents in stamps for a copy of the double number, dated June 1. Address, Cranston & Curts, Publishers, 57 E. Washington St., Chicago, Ill.

Hon. Christopher Grimm.

Christopher Grimm was born on March 18, 1828, at Holenbrun, Bavaria, Germany. His early days were spent in obtaining a fair education, such as the times and circumstances afforded, and in learning and practicing practical farming. His father was one of those quaint but admirable characters whose whole desire seemed concentrated in bringing up his children inured to hard work and rigidly honest.

Christopher Grimm left the parental roof on April 29, 1846, and struck out for America to seek his fortune. He landed at Quebec, Canada, but soon left for Milwaukee, Wis., and finally located at Terre Haute, Ind. He at first worked upon a farm; but as soon as he had saved up sufficient to give him a start, he began the grocery business, and continued the same until he moved to Jefferson, Wis., in 1865. At Jefferson he again engaged in the mercantile business, and continued in the same for a number of years.

His brother, the late Adam Grimm, was during this time winning for himself fame as one of the foremost and successful bee-keepers of the country; and when one day a swarm of bees passed over Christopher's place, and he captured them (and they in turn captured him), it gave to the bee-keeping world another earnest and successful worker. It is needless to recount how his love for the business and success in the same grew apace, until he gradually became known as one of the most successful bee-keepers of the country. His apiaries at times exceeded a thousand colonies, and his love for the busy little workers never left him.

The last trip of his life was made on the day of his death, April 20, 1895, and was a visit to one of his apiaries. It was

a beautiful spring day, and he seemed as full of life and happiness as his little friends just awakening to Nature's new beauties; but before six o'clock in the afternoon his heart had ceased to beat, and the sad news sent a chill through the city where he lived.

Christopher Grimm was a man of such sterling worth, uncompromising honesty, so kind and helpful to every one, so sought after for advice, so unflinching in the discharge of duty, and so true to friendship, that his many virtues almost made one forget the fact that his fortunes and his character were, so far as such can ever be, the result of his own efforts.

The American Bee Journal has always found in Mr. Grimm a careful and appreciative reader, and we feel our loss, and extend to those more closely linked our hearty sympathy.

The Apiarian Premium List of the Minnesota State Fair for 1895 is on my desk. The Fair will be held at Hamline, Sept. 9 to 14 inclusive. There should be a good display of apiarian products, as the list of premiums is quite generous. Mr. J. P. West, of Hastings, Minn., is the Superintendent of the bee and honey department. Those interested can address E. W. Randall, Secretary, Hamline, Minn., for a copy of the complete premium list of the 36th Annual Fair of Minnesota. The apiarian premiums offered are as follows:

DIVISION H.—HONEY, BEES AND APIARIAN SUPPLIES.

Lot.		1st.	2nd.	3rd.
1.	Most attractive display and best quality of white clover honey	$12	$8	$4
2.	Most attractive display and best quality of basswood or linden honey	12	8	4
3.	Most attractive display and best quality of extracted white clover honey	12	8	4
4.	Most attractive display and best quality of extracted basswood or linden honey	12	8	4
5.	Most attractive display and best quality of fall comb honey	12	8	4
6.	Most attractive and finest display of comb honey	8	4	2
7.	Most attractive and finest display of extracted honey	8	4	2
8.	Most attractive and finest display of comb honey, not less than 20 lbs., and the manner of putting up for market considered	8	4	2
9.	Nucleus of Italian bees, and queen	8	4	
10.	Collection of different races of queens	8	4	
11.	Beeswax, not less than 10 lbs., soft, bright yellow to have the preference	3	2	
12.	Honey-vinegar, not less than one gallon, to be exhibited in glass	2	1	
13.	Display of apiarian supplies and implements.	8	5	
14.	Largest and best variety of uses that honey may be applied to; illustrated by individual samples of different things into which it enters: cakes, pastry, meats, etc	15	5	

GRAND SWEEPSTAKES.

15.	Largest, best and most attractive exhibition in this department, all things considered	15	8	5

RULES GOVERNING EXHIBITS.

Exhibitors must be residents of Minnesota.

A breach of these regulations, or of any rule of this society will forfeit all premiums that may be awarded.

All honey must be the product of bees within the State, and the bees owned by the exhibitor.

Exhibitors in Lot 14 must be bee-keepers, and produce their own honey.

No entries received after Sept. 7.

A B C of Bee-Culture.—We have some of these books left, and in order to close them out quickly, we renew the low offers we made on them. This is the fine cyclopedia of bee-keeping by A. I. Root, containing 400 pages and nearly 200 engravings. The regular price is $1.25, but we will send the American Bee Journal one year and the "A B C" bound in cloth—both for only $1.80; or the parchment cover (very heavy paper) "A B C" and the American Bee Journal one year—both together only $1.50.

Among the Bee-Papers

Conducted by "GLEANER."

WAX FROM CAPPINGS.

I find from careful tests, that from each pound of capped honey, the cappings, if saved, will make on an average about ¼ ounce of beeswax. This is quite an item when beeswax is 30 cents, and extracted honey 4 or 5 cents. I have saved as much as 50 pounds of wax from 30 colonies, run for extracted honey [spring count], just from cappings with scrapings of hives and frames.—Clark A. Montague, in Gleanings.

F. L. THOMPSON'S PUZZLES.

On page 359, F. L. Thompson gives some back talk about the size of hives that will puzzle some of his opponents to reply to, and I must confess to being a little puzzled to know just what he means when quoting my expression "frames an eighth larger" he says he thought it was "a fourth." I was speaking of 6 frames 16x9, and then said, "What will be said to that by those who want 10 or 12 frames an eighth larger in size?" Of course I meant the common size, 17⅝x 9⅛. Isn't that an eighth larger than the 16x9 frame? In the one frame are 144 square inches and in the other 160, and doesn't 160 come within 2 of being an eighth more than 144? There's a misunderstanding somewhere, and I am not sure where it is, and it will be a relief to have Mr. Thompson settle whether the joke is on me or him.

SPRING AND SUMMER FEEDING.

Spring and summer feeding of bees is so much easier done by feeding out-of-doors that we feed that way almost exclusively unless we know of a hive or more that is clear out, and then we give a comb of honey or one good feed in the hive at night. We keep our feeder at the east side of our honey-house, where the water runs off the house and keeps it full of fresh, clean water whenever it rains, and this helps to keep water out for the bees, and at the same time keeps the feeder from drying up if we forget to keep water in it. Just now we are feeding only by putting the syrup in feeders in the evening, and on top of the feeder we set some black sections of honey-dew, as we don't care to feed much honey-dew by itself; then we cover over the feeder so as to shed off the rain should it come in the night. The bees work at the feed late in the evening and early in the morning, and have it all taken up before the neighbors' bees, two or three miles away, come around, and then they have the day to go to the woods and orchards.—Mrs. L. C. Axtell, in Gleanings.

CARNIOLAN AND BLACK BEES.

Bro. Abbott wonders (page 302) that any one has trouble distinguishing between blacks and Carniolans. Have to fix that up, Bro. Abbott, with the friends of the latter race, and those who have them for sale. When they say that the only way to tell them apart is by their actions, it isn't any wonder that those who are not familiar with either blacks or Carniolans should not be able to tell them apart at first sight. There is a good deal in being familiar with a thing, however. What may be easy for you may be difficult for one unfamiliar with Carniolans. I remember the time when to me one negro looked about the same as every other negro, for I had never seen half a dozen of them.

B. TAYLOR'S HIVE AND MANAGEMENT.

His hive, as reported in Gleanings, has 10 frames 13½ inches long by 8¾ deep. As soon as the hive is well filled with brood, a second hive of the same dimensions is added, more or less filled with honey.

"In this system each colony will have two hives at swarming-time. We will give each colony run for comb honey, cases of sections early, for we do not care whether they swarm early or late. We will keep them storing surplus without swarming at all, as long as plenty of room will do it; but we will use no *force* measures to prevent swarming; for, after the most searching effort in that direction, we are now thoroughly *convinced* that it cannot be *profitably* done. When the swarm does finally come (if it does), we will hive it in a hive contracted to eight frames or less; remove all surplus cases from the old to the new swarm; set it on the old stand, turn the entrance of the parent colony in an opposite direction on the vacant space on the same stand to be requeened, and the two colonies will be united again after the white honey-flow."

After the white honey-flow (basswood), sections are re-

moved, combs take the place of the two dummies, a queen-excluder is given, on which is put a hive filled with foundation, or else the two colonies are united, the swarm being placed on top of the mother colony, the old queen being removed. Other hives are added on top if needed, and at the end of the season all above the excluder are removed and abundance of stores given to the colony.

WEIGHING BEES TO ASCERTAIN THE STORES.

Mr. Abbott (page 350) thinks the ordinary mortal who expects to make money out of bees must learn to take a shorter cut than to weigh his colonies to decide about the amount of stores. But there is such a thing as a practical bee-keeper weighing his bees just *because* it is a shorter cut than hefting and looking. So far as hefting is concerned, the man who has done a great deal of hefting knows that while something can be told by it, it cannot be relied on for any great degree of exactness. Suppose the actual weight of No. 7 by the scales is 40 pounds. If the hefter hefts it after hefting a hive of 32 pounds, he may call it 45, and if he hefts it after hefting one weighing 60 pounds he is likely to underestimate it. The more tired he is the heavier the hives will feel. If Mr. Abbott will heft 100 hives with their contents, then weigh the same, he may be surprised to find he's not so accurate a hefter as he supposed.

"One cannot tell the location of the stores by any method of weighing," says Mr. Abbott. Neither can he tell all about the location by looking at the tops of the frames, and surely when Mr. Abbott talks about "shorter cuts" he doesn't mean we should take out the frames one by one to see where the honey is in each. I don't suppose there's anything so very different about the way bees place their stores in Missouri from what they do in York State. When I weigh a hive which shows by its weight that about 40 pounds of honey is present, I know the important thing to know. I know the honey is in the hive, and I know without looking at each frame separately that it is not all at the bottom of the frames. I know, too, that wherever it may be placed in the hive it is a good deal better than if it was "in the moon," for the bees have a trick of moving it where they want it, and where it will do the most good.

Mr. Abbott has my permission to examine with his *eyes* and heft with his *hands*, and I'll get along generally without either that or weighing, but if there comes a time when it is a question whether there's need of feeding up to prevent starving, and I want to get along with as little time as possible, I'll weigh.

Notes AND Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Crosses the Best.—"W. Gunther stated that after years of experience he had found that Italian queens were not as long lived as black ones, and that Italian colonies more frequently died in the winter; hence he preferred a cross between them."—Notes by F. L. Thompson, in Review.

I am led to wonder if many bee-keepers have had a similar experience. If so, this would be another reason in addition to those given in my articles on comb honey why the Italians are not the best bees under all circumstances. I have noticed, myself, that more Italian colonies than blacks die in this locality in the winter, but I have been inclined to attribute it to the fact that nearly all, if not all, who have Italians have them in hives with shallow frames, while most of the blacks are yet in old box-hives. I noticed not long ago, while visiting an apiary of Italians, that all those in tall hives were alive, while those in hives with shallow frames were about all dead. But, notwithstanding, I am inclined to the opinion that we have bred too much for color and not enough for hardy, rough-and-ready business. We can afford to be stung a few more times, if we are well paid in honey as an offset, and find strong and healthy colonies in our apiaries in the spring, instead of empty hives.

British Comments.—In the British Bee Journal of April 25, a Mr. Brice, writing under the title of "American Antiphrasis"—whatever that may mean—pours out his wrath and indignation on the writer of these "Notes and Comments," not for any offense committed against his own superb dignity, but in defense of the editors of the British Bee Journal, whom he imagines I have insulted even to the verge of mortal combat. If it were not for the fact that "ye editors" are "averse to noticing this sort of a thing," I do not know but I might expect the entire British navy to sail up the "Big Muddy" and blow the top off of our fair city, so great seems to be his wrath. However, I trust his digestion has improved by this time, and, if so, I should be glad to have him ponder over such phrases as the following: "Anyone possessing a grain of common-sense;" "dubious methods;" "playing a bit low;" "distinctly savoring of dishonesty." I should say, to use Mr. Brice's language, that any man who found it necessary to use so much billingsgate, must be "hard up for copy." If I thought all the people on the other side felt as pugilistic as Mr. B., I would be inclined to say, "Have a care, John; do not prod the Eagle too much. He's an ugly bird when he gets riled, and hard to manage." But they don't.

I have the impression that the editors of the British Bee Journal are scholarly gentlemen, and abundantly able to take care of themselves, and I am inclined to think they did not thank Mr. Brice for rushing to their defense in this unbecoming, and what we would call, on this side of the water, ungentlemanly, way. I have no disposition to "discredit" anyone in my "notes," and if I misunderstood the drift of the quotations upon which I commented, I am sorry, and stand corrected. I want to say, however, that we call any note made by the editors an "editorial," and I find the reply just as I quoted it, and will leave it to any man of ordiuary intelligence to decide whether it does not convey the impression that the writer believed in open-air feeding. Turn to page 222, and read the quotation as I gave it. Somebody teaches open-air feeding here, editorial or no editorial, Mr. B. to the contrary notwithstanding.

As to the other quotation about bees being animals, I may have misunderstood it, but I hardly think I would be open to the charge of not having "common-sense" if I did, since I have seen the question asked in public print, "If bees are not animals, what are they?

I may as well say here that my "notes" are open to the same kind of treatment that I give to others, but I hope they may be discussed in a gentlemanly way, and I will try to clothe my replies, if any are made, in such language as becomes a gentleman. All I ask is fair treatment, and that people write over their own names. This, in my opinion, is the only merit Mr. B.'s article has. There is one kind of criticism to which I make it a point to pay but little attention, and that is when I do not know the real name of the author. If the Editor will excuse me, I will say that I have but little interest in articles which are fathered by a—nobody. I thiuk if Observer, Somnambulist (I beg the lady's pardon), Gleaner, Jake Smith, Bee-Master, and others would write over their own names, the contributions would be much more valuable. If a thing has value, one should not be ashamed to own it. If it has not, then it is not worth the printing. If it has value of itself, it will be of more value if backed up by a personality with a real name. I wish we might drop all of this *nom de plume* business, and let the world know who we are and where we are *at*.

I will say further, that the American Bee Journal has only one editor, so far as I know. The writer of "Notes and Comments" is no more an editor of this Journal than Mr. Brice is of the British Bee Journal. In fact, apparently not so much so, as Mr. Brice seems to think it his duty to defend the editorial staff of the British Bee Journal, while I think our editor is abundantly able to defend himself.

Ten Weeks for Ten Cents.—This is a "trial trip" offer to those who are not now subscribers to the American Bee Journal. Undoubtedly there are thousands who would take this journal regularly if they only had a "good taste" of it, so as to know what a help it would be to them in their work with bees. In order that such bee-keepers may be able to get that "taste," the very low offer of "10 weeks for 10 cents" is made.

Now, dear reader, you cannot do a better service than to show this offer to your neighbor bee-keeping friends, and urge them to send on their 10 cents and get the next 10 numbers of the old American Bee Journal. In fact, *you* could afford to send the 10 cents for them, and then after the 10 weeks expire, get them as new subscribers for a year. They will be easy to secure then, for the 10 numbers will be a fair trial, and they will want the Bee Journal regularly if they are at all interested in bee-keeping.

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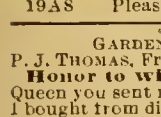

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GARDEN CITY, Kan., May 13, 1895.

P. J. THOMAS, Fredonia, Kan.—

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J. HUFFMAN.

Big Yellow Golden Italian Queens 75c

Three for $2.00. Three-banded, same price. 1-Frame Nucleus, with Untested Queen, $1.75 2-frame, $2.25. Satisfaction guaranteed.

P. J. THOMAS, Fredonia, Kan.

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General Items.

Hives Loaded with Honey.

Bees are doing wonders here. They are done swarming, and their hives are loaded with rich honey. A. J. BIRD.

Dos Palos, Calif., May 25.

Linden Killed by the Frost.

Linden will not yield honey this season here. The frost has killed the buds. Our only hope for honey of fine quality now lies in clover. T. F. BINGHAM.

Abronia, Mich., May 27.

A Successful Year Promised.

I have 152 colonies of bees, all doing finely. I extract about 40 pounds per colony weekly. White sage and wild alfalfa are in abundance. This promises to be quite a successful year for the honey output. CATHARINE M. GRAY.

Los Angeles, Calif., May 25.

Poor Prospect for Honey.

We received no honey in this neighborhood last year. It was too dry, and the flowers secreted no nectar. My 68 colonies, in the spring, were reduced till autumn to 53. At this time I have 49 colonies in fair condition. The prospect for honey this year is bad. The white clover—our honey-plant—is gone, or is in very weak condition. WM. ADIX.

Buck Creek, Iowa, May 29.

The Mission of the Bees.

In reading the beautiful poem, entitled, "The Hum of the Bees in Spring," by P. D. Wallace, on page 341, I thought justice to the bee required something like this, that I added, and he is welcome to use it if he wishes:

But the true mission of bees
Is to visit the trees,
And distribute the pollen of flowers,
That the fruits may mature,
And the gardener be sure
Of returns from his trees and his bowers.

J. A. PEARCE,
President Grand River Valley Hort. Society.
Grand Rapids, Mich.

Report on Wintering, Etc.

I had 13 colonies of bees last fall, two of them being the 5-banded Italians. I wintered all 13. I have 20 good colonies. I have bought 4 Italian queens and introduced them all right. It was my first trial. My average crop last year from black bees was 50 pounds to the colony.

I wintered all my bees on the summer stands, the hives wrapped with cotton batten. The colonies are strong. To-day I transferred 11 colonies from box-hives to the 8-frame dovetail hives without loss.

C. R. RHYNE.

Harden Station, N. C., May 23.

Bees and Strawberries.

I am a bee-keeper in a small way, and also engaged in fruit-growing. I value the bees as assistants. But as I am a little puzzled over Mr. Abbott's position relating to bees and strawberries, and as he and Mr. Secor both adopt the motto—"I want the facts rather than the theories," I will briefly give my experience relative to this question.

I have lived in the edge of the Michigan fruit-belt for many years, and know something of the practice of strawberry growers. On page 283, Mr. Abbott says: "The rows of vines producing stamens only, bears no fruit, of course, and are of no value only as fertilizers." And then he seems to con-

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For July and August only. To those who have never tried our strain of Honey-Gathering Italians, we will make this Special Offer for July and August only, to introduce our Bees in your locality: We will send one Warranted Queen in July and Aug. for the trifling sum of 50 cts. **Remember,** the Queens we are going to send out for 50 cts. are warranted to be purely-mated, and if not, send us a statement of the fact and we will send another free of charge. Only one Queen will be sent at the above price to one address. If you want any more you must pay full price as per Table of Queens in our Circular, which we mail with each Queen. Address all orders to—

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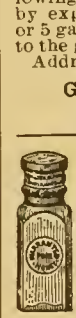

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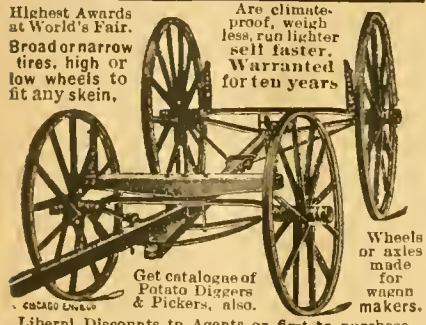

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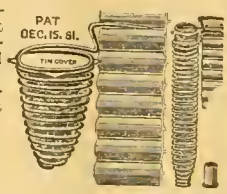

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IMPORTED Italian Queens reared this yr., $3.50 each. Tested Queens—**Breeders**—$1.50 to $2.00 each.
21A **W. C. Frazier, Atlantic, Iowa.**

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vey the idea that such non-productive varieties are used every second or third row, or more, to fertilize the pistilates. Now there may be such, but I never saw or heard of a variety producing blossoms *wholly* staminate. I never *heard* of any one using a non-bearing variety as fertilizers, but some such as the Wilson, Michael's Early, etc., which are themselves heavy bearers. Now if Mr. Abbott knows of such wholly staminate, non-bearing varieties, will he please name them, that we may steer clear of them?

I take no side in this discussion, only give my experience, and that is, that my bees have very little use for my strawberries or my neighbor's. J. E. KING.
Sodus, Mich., May 19.

A Common Beetle.

I send a species of the bug generation that seems to bother my bees very much. So far as I have noticed, it only stays at the entrance of the hive. Two or three have been found on the frames at the bottom. It made its appearance in the last five days. What is it, and what is its office? Will it it do any special harm? T. L. PARSONS.
Tampico, Tenn., May 20.

Prof. Cook says this about it:

The insect is *Euryomia india*. It is a common beetle all through the East. The grub lives in the earth, and the beetle is notorious for eating into ripe fruit, apples, pears and peaches. I have never heard before that it harms bees. I think it must have been after the honey. I do not think it can do any serious mischief.—A. J. COOK.

Expects a Good Crop of Sweetness.

From present indications my bees at Evansville, Ind., are going to give me an extraordinary crop of sweetness. My manager there reports them all in fine condition. I would locate an apiary here, but there is an ordinance forbidding the keeping of bees within the city limits, passed by the city council some years ago, and the local fraternity of bee-keepers never had backbone in them enough to fight the ordinance. I seriously contemplate joining the National Bee-Keepers' Union, and get it to help repeal the ordinance passed by bull-necked whiskey bloats. Sam Jones has been hitting them pretty hard, and succeeded last Sunday eve in raising $25,000 for a Young Men's Christian Association building. J. C. WALLENMEYER.
Owensboro, Ky., May 27.

Bees Doing Finely.

I have 4 colonies of the 3-banded Italians and 4 of hybrid. I put 10 colonies in for winter last fall, but lost two—one died and the other lost its queen. I united the bees with a weak colony. The one that died was in a hive with frames 9⅛x17⅝. I do not know whether they froze or starved; they had plenty of sealed honey left. The balance of my hives have frames 12x12, outside measure. I do not blame the shallow frame for the ones that died. I prefer the deep frame. The balance of my bees came through all right, and are doing finely. Our first honey-plant here is soft and hard maple, dandelion, spice, red-bud, black and red haw, then comes the locust, which lasts about two weeks, and raspberry, blackberry, which are all good for bees. Then we have white and red clover, linden and other blossoms. S. L. DELANY.
St. Leo, W. Va., May 27.

Deserted the Hives, Etc.

I haven't many bees at present. Two of my colonies deserted their hives this spring, for some cause or other, though I couldn't say why they did so. They had plenty of honey in the hives. I looked into the hives in the morning, and I found about a pint of bees clustered about the queen, and at night they had all disappeared,

Globe Bee Veil

By Mail for One Dollar.

Five cross-bars are rivited in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through.

It is easily put together and folds compactly in a case, 1x6x7 inches, —the whole weighing but 5 ounces. It can be worn over an ordinary hat; fits any head; does not obstruct the vision, and can be worn in bed without discomfort. It is a boon to any one whom flies bother, mosquitos bite, or bees sting.

☞ This Veil we club with the Bee Journal for one year—both for $1.75; or give free as a Premium for sending us 3 New Subscribers to the Bee Journal at $1.00 each.

Household Repairing Outfit.

This Outfit is a combination of the practical, tried and common-sense tools and materials that will enable anyone with enough ingenuity to drive a nail, to do his own half-soling, boot, shoe, rubber and harness repairing, right at home. No pegs required. Simple wire clinch nails. Saves time, trouble, expense and vexatious "shoe-maker's broken promises." Entire Outfit, neatly boxed, by express, only $2.00.

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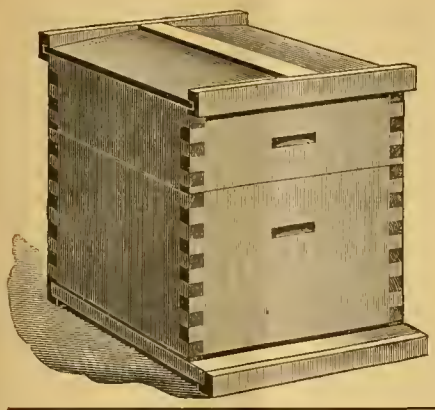
This department is only for your "Wants" or bona-fide "Exchanges," and such will be inserted here **at 10 cents a line** for each time, when specially ordered into this department. Exchanges for cash or for price-lists, or notices offering articles for sale, will not be inserted here—such belong in the regular advertising columns, at regular rates.

TO EXCHANGE--Buzz-Saw, Shipping-Cases, Laug. Section-Frames with tin separators, for Queens, Honey, or own offer.
22A4t G. M. DEER, Riga, Mich.



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No. 1 CREAM SECTIONS — 4¼x4¼x7-to-ft.; 1¾, 1⅞, 1 15-16 and 2 inch:
1000 for $1.50. 5000 at $1.40 per M.
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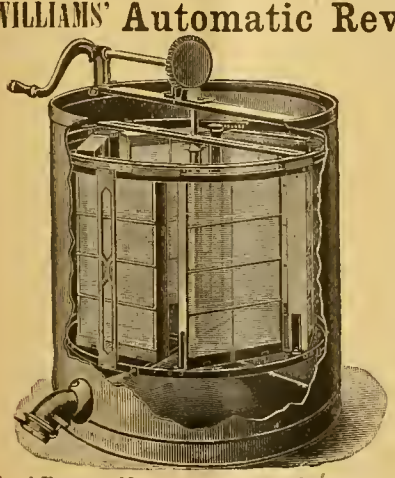

Perfect in Principle and Workings. Here is what the veteran bee-keeper, N. E. France, of Platteville, Wis., says of it: "I consider the Williams Automatic Reversible Extractor head and shoulders above any I have ever used; and furthermore, consider it the BEST on the market."

100 Italian Queens.

Reared in 1894. We make the readers of the Bee Journal **A Special Offer,** in order to have them move off quickly: for the next 30 days we will sell these Queens as follows:

One Queen reared in 1894	$ .75
6 Queens " "	4.00
12 " " "	7.00

These Queens were reared from fine stock and are right in their prime; they are a great bargain

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P. S.—We have in one of our bee-yards, a few Mismated Queens—to those that want them, 25c, for one, 5 for $1. Stamps taken for single Queen. Send Express Money Order payable at Barnum, or P. O. Money Order payable at Boscobel, Wis.

there being no dead bees in the hive. I would like to have some one explain this, if he will.

The top-bars of my frames are 19 inches long, 1⅛ wide, and ⅞ thick, leaving the lower side of the top-bar flat and smooth, with a groove cut in the center 1-16 of an inch wide to fit in the brood-foundation. The end-bars are 9½ inches long, ⅜ thick, and the same width as the end-bar. The bottom-bar is 17⅛ inches long, and ¼x⅜ wide. This makes the frame, outside measure, 17⅝. My hives are after the Langstroth pattern, and they are good enough for me. They are all right to winter bees in in this part of the country. I haven't lost any bees on account of cold weather.

OLIVER DOTY.

Mishawaka, Ind., May 19.

Clover Looks Promising.

My bees came through the winter in good condition. We had two weeks of good warm weather in fruit-bloom, which filled the hives full of bees. If the warm weather had kept on clover would have been ahead of the bees. The last two weeks' cold weather checked the clover, and the bees kept right on, so the hives are boiling over with bees now, and white clover will be in bloom here in about one week, and it looks to be very promising.

HENRY BOHLMANN.

Defiance, Ohio, May 25.

A Criticism—Paste for Labels.

If there is any one thing I love to see, it is a man who is able to form an opinion and stand up for it against all comers. Such a man Emerson T. Abbott seems to be; but unfortunately this, like everything else, can be "run into the ground." Many of our best and brightest apicultural lights (among whom are Messrs. Hutchinson and R. L. Taylor) have pronounced the divisible brood-chamber a grand good thing. A. I. Root seems to be leaning that way also, but now comes Mr. Abbott (page 229) declaring in a not-to-be-contradicted tone of voice, that divisible brood-chambers are "useless traps," "of no more use than a second tail on a dog," and "freaks for a museum;" and further declares that reversing is of no value whatever.

Now I believe that the great majority of apiarists admit that reversing is the only sure method of getting combs firmly attached to bottom-bars. Personally, I believe in reversing to secure the above-mentioned results, and also, after three years' experience with the Dovetail, Foster and Heddon hives, side by side, I say that I can do four times the amount of work in a given time with the latter than with either of the former. The trouble with the divisible brood-chamber hive is, that but few understand the peculiar system of manipulation which is required, and without which they are of no advantage whatever, as I can see.

Mr. Abbott aspires to be a leader in apiculture, and as such he should be very cautious about absolutely condemning *anything*, lest he by his sweeping denunciations do inexcusable injustice, and irreparable injury. The novice is apt to look up to and follow the leaders, and therefore much harm may be done. For Mr. Abbott to say he does not regard the divisible brood-chamber of any value, is all right. We all have a right to express our opinion, but to make the positive assertion is another thing.

It appears from Query 966, that I have a good many of my way of thinking as regards essays at conventions.

Now for a kink: I have talked with many bee-keepers who have had much trouble getting labels to stick on tin. Well, just get some varnish, make it tolerably thin with turpentine, and use as paste, and if your labels come off any more—well, they won't, that's all. I am indebted to my wife for that discovery.

Laclede, Mo. F. H. RICHARDSON.

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SENT POSTPAID BY

George W. York & Co.,

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Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains 250 pages, and 245 illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, $1.00.

Langstroth on the Honey-Bee, revised by Dadant—This classic in bee-culture, has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages; bound in cloth. Price, $1.40.

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Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of Queen-Bees are reared in perfect accord with Nature's way. 176 pages, bound in cloth, and illustrated. Price, $1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopædia of 400 pages, describing everything pertaining to the care of the honey-bees. It contains 300 engravings. It was written especially for beginners Bound in cloth. Price, $1.25.

A Year Among the Bees, by Dr. C. C. Miller.—A talk about some of the implements, plans and practices of a bee-keeper of 25 years' experience, who has for 8 years made the production of honey his exclusive business. It gives full particulars about caring for bees throughout the whole year. 114 pages, bound in cloth, and illustrated. 50 cts.

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The following clubbing prices include the American Bee Journal one year with each book named. Remember, that only ONE book can be taken in each case with the Bee Journal a year at the prices named. If more books are wanted, see postpaid prices given with the description of the books on this page. Following is the clubbing-list:

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3.	A B C of Bee-Culture [Paper bound]	1.50
4.	Bee-Keeper's Guide	1.65
5.	Bees and Honey [Cloth bound]	1.65
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10.	Amerikanische Bienenzucht [Germ.]	1.75
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12.	Rational Bee-Keeping [Cloth bound]	2.00
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17.	Convention Hand-Book	1.15
18.	Poultry for Market and Profit	1.10
19.	Turkeys for Market and Profit	1.10
20.	Capons and Caponizing	1.10
21.	Our Poultry Doctor	1.10
22.	World's Fair Women Souvenir	1.50
23.	How We Made the Old Farm Pay	1.15
24.	Green's Six Books on Fruit-Culture	1.15
25.	Garden and Orchard	1.15
26.	How to Propagate and Grow Fruit	1.15
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In the following Premium Offers the full $1.00 for the Bee Journal one year must be sent us for each new subscriber secured, and each new subscriber will also receive a free copy of Newman's "Bees and Honey," bound in paper, except where the sender of the club is a new subscriber himself—he would be entitled only to the premium book, and not "Bees and Honey," also.

For 4 new subscribers, No. 1 in the list of books; for 3 new subscribers, your choice of Nos. 2, 4, 5, 7, 10, 12, 28; for 2 new subscribers, your choice of Nos. 3, 6, 8, 9, 11, 13, 14, 15, 22, 30; for 1 new subscriber, your choice of Nos. 16, 17, 18, 19, 20, 21, 23, 24, 25, 26, 27, 29.

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T. R. CANADY,

23A5t FALLBROOK, CALIF.

Mention the American Bee Journal.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., June 7.—We have our usual dull season which we look forward to and expect. Honey is entirely forgotten during the months of June, July and August. The market is pretty well cleaned up of all grades of honey, so the prospects are encouraging for the coming season. We are getting 13@14c. for light comb. J. A. L.

KANSAS CITY, MO., June 3.—We quote: No 1 white comb honey, 1-lbs., 13@14c.; No. 2, 11@12c.; No. 1 amber, 10c; No. 2, 8c. Extracted, white, 7c.; amber, 6c.; dark, 5c. Beeswax, 22c. C. C. C & Co.

CHICAGO, ILL., May 23.—The trade in comb honey is very light at this time of the year—as it is between seasons. Soon we will get the new crop, and it will come on a bare market. Just now what little comb sells brings 14c. for the best grades. Extracted, 5½@7c. All good grades of beeswax, 30c. R. A. B. & Co.

CINCINNATI, O., June 8.—Demand is slow for comb honey at 12@16c. for best white. There is a fair demand for extracted honey at 4@7c.

Beeswax is in good demand at 25@31c. for good to choice yellow. C. F. M. & S.

PHILADELPHIA, PA., May 18.—Comb honey is in poor demand. Large stores are now waiting for the new crop. Extracted is in fair demand. Beeswax has declined some, but good sales keep market from being overstocked. We quote: Comb honey, 9c. Extracted, 4½@6c. Beeswax, 29@30c. W. A. S.

NEW YORK, N. Y., May 24.—White comb honey is well cleaned up. Considerable buckwheat remains on the market, and, as the season is about over, some of it will have to be carried over. Extracted is doing fairly well, with plenty of supply to meet the demand. New southern is arriving quite freely. We quote: Extracted, white, 6@6¼c.; amber, 5@5½c. Southern, common, 45@50c. per gallon; choice, 60@65c.

While beeswax holds firm at 31@32c., we think it has reached top market and do not expect it to go higher. H. B. & S.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

J. A. LAMON, 43 South Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 120 & 122 West Broadway.
CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.

Kansas City, Mo.

C. C. CLEMOMS & Co., 423 Walnut St.

Buffalo, N. Y.

BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

Philadelphia, Pa.

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C. F. MUTH & SON, cor. Freeman & Central avs.

A Grand Bee-Smoker is the one offered by W. C. R. Kemp, Orleans, Orange Co., Ind. It has a 3-inch fire-barrel, burns all kinds of fuel, and is simple, efficient and durable. Send 100 cents for a sample smoker, and you will have a rare bargain.

Italian Queens

Warranted Purely Mated, 50 cts. each. Tested, 75 cts., or 2 for $1.00; 12 for $5.00 Good Breeders, $2.00 each.

F. A. CROWELL,
24A5t GRANGER, Fillmore Co., MINN.
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Before placing your order for Supplies write for my VERY LOW PRICES on

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Led all others in the Government experiments It exceeded the Given by 6½ %, and all the rest by 24½. See Sept. Review, 1894. The Largest, Most Comprehensive Catalog of everything needed in the Apiary, FREE. Cash for Beeswax, or will make it up in any quantity. **M. H. HUNT, Bell Branch, Mich.**
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I have got 50 Fine, Choice, Select Breeding Italian Queens—$1.25 each: Untested, 50 cts. About 10 out of every 12 will make fine tested Queens. List Free. **L. E. EVANS,**
24E4t ONSTED, Lenawee Co., MICH.
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For Bee-Hives and Supplies.
Catalogue Free on Application.
W. H. PUTNAM,
21A4t RIVER FALLS, Pierce Co., WIS.
Mention the American Bee Journal.

Queens
Either 3 or 5 Banded, 75c. each; 6 for $4.25. Give me a trial. I can please you. Catalog free.
Chas. H. Thies,
24Atf STEELEVILLE, Randolph Co., ILL.
Mention the American Bee Journal

SMOKERS : KNIVES
Send for Circulars and Prices, to
T. F. BINGHAM, ABRONIA, MICH.
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NUCLEUS Colonies, Italian Queens, Bee-Supplies. G. M. Whitford, Arlington, Neb
24A4t *Mention the American Bee Journal.*

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Feeding Bees in the Spring.

Query 975.—Is it profitable to feed in the spring when bees have enough to keep them alive till the main honey-flow?—Ohio.

W. R. Graham—I think not.

G. M. Doolittle—I think not.

J. M. Hambangh—I think not.

Eugene Secor—I do not practice it.

P. H. Elwood—Not in this locality (New York).

Chas. Dadant & Son—Yes, if you want strong colonies.

Wm. M. Barnnm—No. When the above condition is present—abstain.

W. G. Larrabee—If they have enough without being obliged to be saving, no.

Jas. A. Stone—I have never done it, for the reason that I did not think it paid.

B. Taylor—If they have enough for brood-rearing it is doubtful if it pays to feed.

Prof. A. J. Cook—Not in commercial bee-keeping, if the bees have a generous supply.

E. France—If to keep them just alive, yes, feed. If they have a great plenty, then no.

H. D. Cutting—If they have plenty of honey, it will not pay if you have many colonies.

C. H. Dibbern—If there is a certainty of a good flow later on, I think it pays to feed moderately.

E. T. Abbott—No; generally speaking, the more you fuss with bees in the spring the less bees you will have.

Mrs. J. N. Heater—Not if they have enough to rear yonng bees with, in addition to keeping the old bees alive.

Dr. J. P. H. Brown—I want my bees to have a little more stores than sufficient "to keep them alive until the main honey-flow."

R. L. Taylor—Enongh to keep them alive is not sufficiency. Give them an abnndance, but it is just as well to give it all at once.

Dr. C. C. Miller—I don't know. If they have *just* enough it may pay, and possibly it may pay at any time when bees would otherwise be "black idle."

Allen Pringle—They ought to have more than enough merely "to keep them alive till the main honey-flow." They want quite a bit just for *encouragement*. If they have not got that, give it them.

J. E. Pond—Most certainly not. It might be well in some cases to scratch the capped cells and set the honey running, but feeding with ample stores in the hive is like "carrying coal to New Castle."

Mrs. L. Harrison—It is better to feed in the fall. When there is a dearth of honey, following fruit-bloom, it pays to feed in the interim between it and white clover. Honey given to bees to-day (April 24) is not noticed by them; they prefer to go to the fields.

G. W. Demaree—Your question is too indefinite to warrant a definite answer. Stores to "keep bees alive" is not sufficient to keep them rearing brood as they ought to, to make them profitable. There is no need to feed, if bees have plenty of stores to nse freely till the flowers begin to yield.

Rev. M. Mahin—Bees should have enough not only to keep them alive, but to make them feel that there is no famine impending. I do not believe in feeding early in the spring before there is anything to be gathered. During a honey-dearth it will pay to feed.

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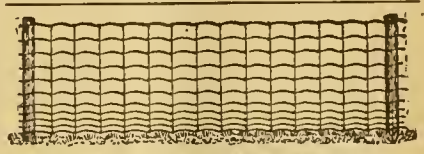

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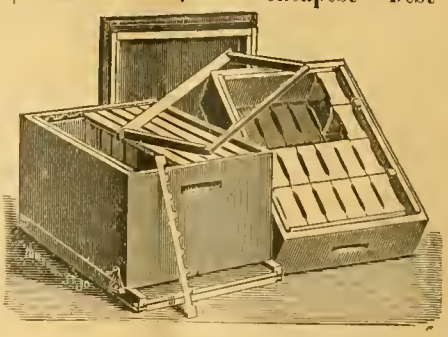

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35th Year. CHICAGO, ILL., JUNE 20, 1895. No. 25.

Contributed Articles.

On Important Apiarian Subjects.

Tacks or Small Nails for Spacing Frames.

BY CHAS. A. F. DOERR.

On page 317, I see an article about spacing-tacks. Let me tell how I use spacing-tacks, and used them with satisfaction more than 10 years ago in Germany.

I use the Gallup frame (11¼x11¼ inches outside measuse), which I make myself of common laths, one inch wide. In each frame 4 spacing-tacks (wire nails, thin, one inch long, with very small heads) are driven about an inch from the ends

Fig. 1.

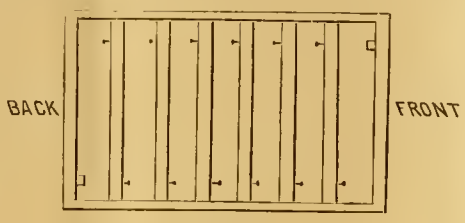

Fig. 2.

of the top and bottom bars. The tacks stand out ⅜ of an inch, so the frames are apart 1⅜ inches from center to center. They are arranged as in Fig. 1, the left being the top-bar, and the right the bottom-bar.

The top and bottom bars take each 2 spacing-tacks—the top-bar one on the right on the front side, and one on the left on the rear side. In the bottom-bar the tacks are arranged the other way, viz.: one on the left on the front side, and one on the right on the rear side. You see, this arrangement remains the same, if you turn the frame front to back, or back to front.

In order to space the first and last frames accurately, the front and back walls of the hive have each two little cleats (⅜ of an inch thick, and about 1½ inches long) nailed to them. On the front wall they are arranged thus: Above on the left, and below on the right hand side. On the back wall reversely —above on the right, and below on the left side. The upper ends of these cleats above are even with the upper surfaces of the top-bars of the frames, and the lower ends of the cleats below are on a level with the under surfaces of the bottom-bars. If you remove the cover of the hive and every other frame out of it, the top view will look like Fig. 2.

As I said above, I use for spacing-tacks thin wire nails, one inch long, with very small heads. The reason is that they might not interfere very much with the wire basket of the extractor.

I have no trouble with brace-combs.

One thing that is against this method of self-spacing of the frames is, one must be careful in taking out one of the inner frames, or the nail will cut through the adjacent combs. But if you leave a little play behind the last frame, and move all the frames a little backwards until you come to the one you intend to take out, it can be done without injuring the frames next to it.

Maywood, Ill.

How Shall We Increase Our Bee-Pasturage?

Read at the Bee-Keepers' Educational Society of Rhode Island

BY DR. MACKEY.

I think the greatest need of the bee-keeper in this locality, or at least about Attleboro, is an improvement in bee-pasturage; and an important question for us to discuss at this time is, How shall we increase it? That all may have an opportunity to ventilate their ideas and tell of their localities' needs, I am prompted to select this subject.

I think we as individuals, as well as bee-keepers, can do much to encourage the farmer to cultivate those plants that furnish a large supply of nectar. Our voices should be raised to encourage the farmer to raise buckwheat—a plant that will bear all kinds of abuse, and will flourish on the poorest land, but will respond profitably to thorough cultivation and manuring. Some years ago I sowed it quite liberally to clear land of objectionable plants or weeds, to be plowed in as a green manure, and this followed by winter rye, and this again plowed in, in the late spring, placed the soil in a condition to raise a heavy crop of corn, with the aid of ground bones and wood ashes in the hill, leaving the field in a state of tillage prepared to successfully grow any crop.

Since the introduction of the Japanese variety of buckwheat, many waste, or nearly barren, fields might be cultivated profitably, not only for its grain, but the straw is useful as a litter, or bedding for cattle, or as a mulch. If all poultry-raisers were aware of its great value, and how improved the appearance of the plumage and general condition of all

varieties of fowl that fed upon it sparingly and continuously through the winter months, a much larger supply would be required, and a large increase in the acreage cultivated.

Another direction in which we could increase our honey-bearing plants is to encourage the use of wood ashes and ground bone applied as a fertilizer to wornout or exhausted pastures, and one who has never tried it will be surprised to

see how the more nutritious plants will supplant the wild weeds and grasses, and white clover is sure to come in in abundance, but would show itself much sooner if a little seed was scattered about. It is coming to be pretty generally accepted among the more advanced or intelligent farmers, that the order "Leguminosæ," to which belong the clovers, beans, peas, etc., have the power of taking nitrogen from the atmosphere by its leaves, or from the soil through its roots, and converting it to its own use. With the far-reaching taproot of the clovers, to bring the mineral elements from the subsoil, they are recognized as the most economical means of returning many worn-out fields to their original fertility.

As we look about our farms, we find, comparatively speaking, a very small percentage of Alsike clover cultivated—certainly as much, if not more, valuable as a fodder-plant than the coarser red varieties, making a much finer hay, and, what I have seen of it, not losing its leaves in making, to such an extent as the red varieties, but as a honey-plant it takes its place next to white clover, being superior in every way to the red.

The scarlet or Italian clover is now coming into prominence as a bee-plant as well as a new fodder-plant, and the testimony of the majority is not yet entirely in its favor, as it is certainly not as hardy nor as robust as our common varieties, but in the South these qualities may recommend it. I grew it in 1870 as an ornamental plant, and also grew quite a plat as an experiment, comparing its value with other forage plants and grasses, but did not find it very attractive to the bees, and did not consider it at that time as of any value as a honey-plant, but we can form no opinion of the value, or otherwise, concerning any plant, of its honey-bearing qualities, without we can see it growing more than one season, as bee-keepers in all localities find that certain years their most important honey-plants fail to secrete or furnish nectar, although their blossoms are just as plentiful.

There are two varieties of clover—the *Trifolium agrarium* and the rabbit foot, *Trifolium arvensis*—that are of no value, as I have never seen a bee upon either of them, neither cattle nor hogs feeding upon them in a pasture.

It is becoming common in some localities to sow oats and Canada peas together, and the pea-blossoms are very attractive to the bees. There are also many plants which supply more or less honey, that we could encourage the growth of, by using a little effort in disseminating the seeds.

The sweet clover—melilotus—will become readily naturalized by the roadsides and in waste-places, by scattering a few seeds in favorable localities as we pass by. It not only furnishes flowers, but a continuous supply much longer than the majority of plants. The mignonette and many of the mint family add to our variety of honey-bearing plants; also the giant spider flower, *Cleoma pungens*, and the Rocky Mountain bee-plant. *Cleoma integrifolia* could be easily introduced, the former becoming naturalized from the first, and reseeding itself, and, further, is greatly admired by many as an ornamental plant. These and a host of other honey-bearing plants useful for ornament would be largely grown if we would take pains to give the seed to our flower-loving friends.

Attleboro, Mass.

What Dr. Miller Thinks.

Licking Up Leakage.—The advantage of escapes mentioned by Mr. Dadant on page 357, namely, getting the bees to lick up the leakage caused by breaking apart burr-combs, is one not to be despised. It may not be generally known, however, that the same end may be reached more easily without the escape. Just pry up the super, honey-board, or whatever is over the burr-combs, and then let it instantly back in place. The bees will clean up the honey so the burr-combs will come off just as dry as though an escape had been used.

Unqueening.—Out of respect for Father Langstroth, who is, I believe, the originator of the word, I think we should say *un*queen and not *de*queen. Removing the queen at swarming-time, as mentioned by C. H. Chapman, page 368, has been practiced with more or less variation by a number of bee-keepers, especially in New York State, and it would be interesting if Mr. Elwood, or some one else, would tell us whether it is now practiced as much as formerly. I practiced it at one time quite extensively, but gave it up. I think others may have been more successful.

It is only fair to say to novices that one part of the program is very difficult of execution. Friend Chapman rightly puts emphasis on the word *every* each time he says "remove *every* queen-cell." Now that's one of the things I never could be entirely sure of doing. I might think I was specially inefficient in that direction, but I am inclined to think the average bee-keeper would have the same difficulty, from the fact that my assistant with a very sharp pair of eyes also failed at times. It is not so very difficult to find the cells that had been started before swarming, or pre-constructed cells, but the post-constructed cells, or those started from larvæ in worker-cells after the first cutting out, are sometimes so well hidden, or so slightly raised above the general surface of the comb, as to be very difficult of detection.

I wish Friend Chapman and others would tell us how many times, if any, they have failed to find *every* cell.

Followers.—On page 362, Bee-Master objects to the use of followers on account of their awkwardness, but says the awkwardness may be owing to his stupidity. I don't believe it's his stupidity, but his not being used to it. I didn't believe in followers, but at one time I had to use followers for the sake of making the room for the frames a little smaller, and after once getting used to them I wouldn't like to be without them. But I must confess that I have hives with Hoffman frames in which the followers are a good deal worse than awkward. There is so little spare room that it is easier to get out a frame first than to take out the follower first. With the right amount of room it is easy to take out the follower, and when that is out there is no trouble about getting out the frames.

That Michigan Law.—I wish Bro. Hilton would tell us whether there is not some mistake about that law mentioned on page 364, making it a crime to have a colony of bees within 90 feet of the highway. Somehow it doesn't seem to tally with the intelligence of the Wolverines.

Smoking Bees.—I hesitate to "talk back" to a veteran like Dr. Brown, but, Doctor, you use more smoke than I do before opening a hive. (See page 365). One puff at the entrance, and immediately I commence taking off the cover. But then I use more smoke at the next stage, for I don't wait to see whether the bees "show a desire to come up," but give them smoke on top just as soon as the cover is raised. I doubt if you mean that you wait a full minute of 60 seconds before giving the second smoke. Sometimes that would mean a whole hour in a day, which could hardly be afforded.

Piping of the Queen.—"Done by the wings," says Dr. Brown, and perhaps that is the general teaching, but Cheshire says: "It is certain that the wings are not concerned in its production, since queens clipped so vigorously that not a vestige of wing remains can be as noisy as others." He thinks the stridulation is produced by the third and fourth abdominal plates.

Temper and Headache.—There goes Dr. Peiro again with his inconsistencies. On page 370 he says temper causes headache, and then instead of advising to get rid of the temper, he says: "Keep your temper!" I hope my wife won't see what he says about hot water and soda curing the temper, for I don't like hot water and soda. Marengo, Ill.

Bees and Fruit-Bloom—Extracting Honey.

BY MRS. L. HARRISON.

Woman-like, I want to put in a word in answer to the question, "Do bees work on strawberry blossoms?" My observations, with reference to bees pollenizing strawberry and blackberry bloom, is confined to a small garden plot, and may not have much weight. I saw a bee in Florida last winter working upon the strawberry bloom, in a half-hearted sort of a way; and occasionally in Illinois I've seen them do the same thing. Now one bee-keeper may make the assertion that bees never work on strawberry bloom, basing his opinion upon his observations in his own locality; and another, in a distant part of this great land of ours, say that they do, and both be correct, as their observation goes. In a land where there is not sufficient frost to destroy insects, bloom is not so dependent upon honey-bees for pollenization, as where there is. A few years since the assertion was made, that bees never work upon corn. I've seen them work upon sweet-corn for days, gathering the sweet juice that exudes from the axils of the leaves. In northern Vermont, the tassels of corn yield much more pollen than in central Illinois.

When the golden-rod blooms in central Illinois the nights are usually hot, without dew, and no nectar is secreted; while

in the Green Mountains of Vermont, and white Mountains of New Hampshire, it yields largely, for the nights are cool and damp, which are the conditions necessary for its secretion.

We hear much said about orange-bloom honey, yet I heard a bee-keeper assert in Florida, that bees did not gather honey from the orange, and I've seen bees work very shyly upon peach-bloom. Will some of our Southern bee-keepers tell us whether bees gather surplus honey from orange groves? If they do, why does the seed of oranges and peaches produce trees that bear fruit like the original? During the War, a returning soldier brought home a half-bushel of peaches, and his wife planted the seed, which produced quite an orchard, and they all bore fruit alike, and the same as the original half-bushel. If bees carry pollen from bloom to bloom of the orange and peach, as they do in many other kinds of fruit, why does not the seed produce trees bearing different varieties of fruit?

EXTRACTING HONEY WITH HEAT.

The idea! Are we retrograding? Going back to the use of our "daddy's hive?" (See page 335.)

After many experiments, in melting honey, I've come to the conclusion that it cannot be done without imparting to it a waxy flavor. I've put it in a bright new tin pan, and placed it over a kettle of water, stirring it continually, and as soon as it was melted removed it, and yet with all the pains I could take, it would have a twang. Our grandmother's way was better: Put it in a sack and hang near the fire. It should not be called "extracted honey," either, for it will give a bad name to the true product.

Bees in this locality have gathered but little nectar since fruit-bloom. Part of the time it has been very cool, and now a severe drouth prevails, which shrivels the clover leaves.

Peoria, Ill.

Large and Small Hives—Some Big Bees.

BY C. DAVENPORT.

On page 360, Mr. Thompson makes some comments on my article on page 231. He says I argue the matter as if the man who preferred large to small hives would necessarily keep the same number of colonies in both cases. I have not, and do not argue any such thing. What I claim is, that I can, with a few very rare exceptions, get more surplus comb honey with a colony in a hive not larger than the 10-frame, than I can with the same colony in a larger one, no matter whether this colony, or any number of colonies, is located on a range that is over or under stocked.

Mr. T. also says the only statement I make which seems to give positive advantage to the small hives is: "With big hives, where no feeding is done, the season is often an entire failure." He then says: "But it is not unlikely that a considerable percentage (enough to account for the 'often') of the big hives referred to, contained colonies in the first or second year of their existence." That was not the case, Mr. T. If it had been, that article would not have been written the way it was. Continuing, he says: "Which were further embarrassed by being in an apiary of just as many colonies as would he needed for the locality if they were all in small hives."

Most of Mr. T.'s theories are too deep and complicated for me to understand. I thought, though, when I first read his comments on my article, I understood that part of it, but upon second reading I find this last of his that I have quoted may be interpreted to mean two, or perhaps more, different conditions. As I do not know what he meant, I can only say that the big hives referred to were in a yard where there were many times their number of small ones; their range was at all times heavily, perhaps, overstocked. Now, if under these conditions Mr. T. thinks the big hives were "embarrassed" so that they could not show their superiority, if they had had any, over small ones, he and I do not agree.

Let us suppose that Mr. T. is as good a man physically as he is mentally. It would then perhaps be natural to think that he could do a good deal more work than a common man could. Now say he and I, and 10 more ordinary men like myself, have a cornfield containing a large number of rows to hoe. If I, or none of the others, interfere with Mr. T. in any way while at work, when we get done if he has hoed only about two-thirds as many rows as each of the rest of us, would there be any reason for him to say that he could have done more in the same length of time if he had been alone, or that he could if there had been less men, but all good ones like himself? This is just what Mr. T. would ask us to believe, if he claims that the big hives referred to did not have a fair chance to show their superiority, if it had existed.

SOME BIG BEES THAT IMPROVED THEMSELVES.

I will describe those bees that I said in a former article would double discount the best I then had, although that did not express exactly what I meant.

One day, three years ago, early in the spring, when I was returning home from one of the out yards, an old gentleman, who lived on the way, asked me if I was the man that kept so many bees. When I told him I was, he said he had some bees that he would like to sell. He had rented his land, sold most of his stock, and was going to town to live. He did not wish to take the bees, but was unable to find anybody that would buy them. I had all the bees I wanted, but he finally offered to sell them all—9 colonies—for $15, and haul them where I wanted them. I thought they were worth this, or more, so I bought them and had them hauled to the home yard.

The bees were in large box-hives that were about 13 inches square, and from 18 to 24 inches high, having been kept in such hives over 15 years. The bees themselves were very large. All of them had three, and some had four, light yellow bands. They were all powerful colonies, and the hives were heavy with honey, although they had been out-doors all winter. The owner always left them out without any protection whatever, and he did not remember ever losing a colony that had enough to eat.

Soon after I got them I transferred 5 of them to frame hives, and I was greatly surprised at the size of the queens. I thought I had some, and had seen, large queens before, but some of these were nearly one-half larger than any I had ever seen, and as large again as some I have bought. But I did not think they would be as good as some of my own stock, so I doubled up some weak colonies and superseded them with the extra queens thus obtained. The previous summer I had sent for a queen, and when she came she was about the size of any ordinary worker, but the man I bought her of insisted that it was a good-sized queen. I took one of the largest of these big queens and sent her to this breeder. I told him it was a queen, and what I called a fair-sized one.

The 4 colonies that were not transferred each swarmed two or three times in spite of the fact that the location of the hives was changed each time. I intended to rear queens from some of my best stock, and supersede all of these queens after the main flow, but I did not that first year, for the first swarms from those big box-hives gathered more honey than any other colonies in the yard, and counting what the after-swarms and the old colonies gathered, each of them would have secured as much again as the best of the others.

These queens were prolific, but not more so than others I have, and have had, but the workers lived longer, and a good deal longer than ordinary bees. They were also hardier; they would often be busily at work when the weather was such that the others did not leave their hives. They capped their honey whiter than pure Italians, filled the soctions much better, especially if only starters were used, and as a general thing they sealed all the outside cells.

But I have none of these bees now that are pure, or as pure as when I got them, for although they were by far the hardiest and best honey-gatherers I ever had, they had some very undesirable qualities. In the first place they were hard bees to handle—were very vicious and vindictive. The bees of a colony that had been handled, even for a day or two afterwards, would go a long ways out of their way in order to sting somebody, and a person that was stung by one of these bees remembered it for a long time. Contrary to the general rule, the swarms were also often ugly and hard to manage. The first summer I got them the man that was helping me was nearly stung to death in trying to hive a swarm from one of these colonies. Personally I never had much trouble in handling them, but there are a number of reasons why bees as vicious as these were are not desirable.

But the worst fault they had was their great robbing propensity. They were the worst bees to rob that I ever saw or heard of. They never robbed each other, but when no honey was to be had in the fields, they seemed to consider all the others fair prey. But for all their faults—and they had others—I think these bees had certainly greatly improved themselves in regard to honey-gathering, hardiness and longevity.

Southern Minnesota.

Only One Cent a Copy for copies of the American Bee Journal before April 1, 1895. We have them running back for about 10 years. But you must let us select them, as we cannot furnish them in regular order, and probably not any particular copies. Just send us as many one-cent stamps as you may want old copies, and we will mail them to you.

Dividing Colonies for Increase.

BY W. D. FRENCH.

There are many people in our midst who keep bees; but the practical and scientific apiarists of modern development are few. They are composed chiefly of that element who never look into, or read a bee-paper, and know nothing whatever of the progress of modern apiculture. Their anxiety and ambition is in the direction of increase, fostering the idea that bees must issue first, before their propensity leads them to store surplus honey; dividing and subdividing without the introduction of queens, or mature cells, being practiced indiscriminately, resulting in the end by a degeneration of their colonies. Subdividing, by allowing each subdivision to rear a queen from their own larva, takes away all energy and vigor from the working force, and produces a queen of inferiority; such queens are longer in hatching, and seldom prolific.

It must be born in mind that it requires nearly one month to mature a perfect queen, and fit her for egg-laying duties. It will be remembered also, that it requires 37 days to develop a worker-bee for field duty, in a normal condition; hence it will be seen that two months has elapsed before the progeny of the subdivision are able to sustain the colony, in which time all old bees have passed out of existence. While a queen in a populous hive will lay two and three thousand eggs every 24 hours, this one, under such conditions, will not exceed so many hundred for the next month to follow.

For the benefit of the inexperienced, I would suggest a method of increase which will be in accord with nature, producing queens of standard value, and with but little intermission on their part, compared with subdivision.

First, reduce the space of the colony to the capacity of five Langstroth frames, by means of a division-board, and allow only two queen-cells to be constructed at a time; the incapacity of the hive restricting the queen from performing her full duty, will compel an issue. Hive them in like manner, and so continue until towards the end of the season, when plenty of room should be given, allowing each colony ample opportunity to prepare their winter stores.

In a good season, where nectar-secretions are in abundance, it is astonishing to note the rapidity in which new colonies will be formed. Foster, Calif.

Canadian Beedom.

Conducted by "BEE-MASTER."

The Color Question in Bees.

Mr. McArthur's article on this subject (on this page) will be read with interest, and is worthy of careful consideration. I do not understand that there is any prejudice against golden-hued bees except in connection with the idea that there is a certain degree of delicacy of constitution indicated by a brilliant yellow color.

It is to be observed that Mr. McArthur does not lay stress on color alone. There must also be a good pedigree. His position is, that every good quality can be so inbred that it will become indelible, and that in addition there may be the beautiful golden yellow tint which is so universally admired.

I suppose the advocates of leather-colored queens will take issue with Mr. McArthur, and state their objections to the bright yellow hue. But wintering those colonies on their summer stands in a position so bleak and exposed as Toronto Island, is about as severe a test of hardiness as bees of any race could be put to; and their having come through the ordeal so well speaks volumes in their favor.

A thorough discussion of this matter cannot but have a tendency to elicit the truth, which is what we are all after, that is, if we are not wedded to pet theories or blinded by self-interest.

A Few Facts About the Color of Bees.

Color is the most distinguishing mark or characteristic whereby we can distinguish one race of bees from another. Some who are very prominent in bee-circles say color is no proof of purity. Would these parties kindly explain themselves? Perhaps they have some better distinguishing mark: if so, please let us have it.

Objections are made to the yellow color—for what reason, I would like to know? It cannot be said that it is a weak color, being the very opposite of that, both in the animal and vegetable world, different altogether from the albino, that shows a weakness in constitution wherever it occurs in the animal kingdom, blindness in some, while in others, deafness.

Let us look again to the vegetable kingdom, especially to herbaceous plants, where this sporting often occurs, and a green sends forth a complete white shoot. Try to propagate *it*, and you cannot, it is too weak to live. Now to show the effects of soil on herbaceous plants, if my memory serves me aright, I think it is Mr. Saulter (Nurseryman, Hammersmith, London, England) who says that by removing plants from one portion of his nursery to another they become variegated. This is purely the action of soil or plant food. This illustration is used merely to show how easily color can be changed or transmitted. If color is such an injury to the bee-business, or an eyesore to some, will they stand down and allow the negro to take their place? Mind you, I don't speak disparagingly of the negro, he is my brother. There are many noble minds among that race, but they are not as yet equal to the Caucasian race. This brings us to the divisions of the human family, which are as follows: White, brown, copper-colored, red, black and tawny, but can be reduced to three, namely, European, Asiatic and African, the other two being mere intervening shades or blends of color produced by crossing.

This illustration of color in the human race can with equal force be applied to our race of bees, and it is wonderful to think that the noblest races of man to be found are those of the regions of Asia Minor. Here it is supposed man was created; here he first received the breath of life, and arose in the image of his Maker. The die has not lost its divine impress, for here we still meet, and in all ages have met, so far as relates to exterior graces, with the most exquisite models of symmetry and beauty. Now when such can be said of the human race, is it not as wonderful that our beautiful races of bees also had their origin in this very spot, and have remained so for ages in their purity, probably existing ere man was?

I sincerely hope that those who are so anxious about the extermination of this color among our bees, as if it were a plague or epidemic, would give the matter a little consideration. Don't be too hasty in coming to conclusions. The experience of the writer is that they are excellent honey-gatherers, queens prolific, marked gentleness, large bees, especially so from the eighth to the twelfth cross, and very hardy. Having wintered several colonies on the summer stands on Toronto Island, to prove their hardiness, I can speak positively on this point. Several prominent bee-keepers advised me against the experiment, and said I would lose them. I thought so myself at one time, it being the severest winter on record. The result proved contrary to expectations. *All* came out alive, and are stronger than those put in the repository. So you see the yellow race can winter safely without a feather-bed. I want no better race, having bred them for 21 generations, and have no hesitation in saying that every good quality can be so inbred that it will become indelible. Those referred to originated from a pure Carniolan mother mated with yellow drones. I have followed on those lines for 21 generations, producing now perfect yellow queens, workers and drones, using the drones from one queen for four years, and can show any one all the stages from the first to the 21st generation.

Remember, this is no guess-work, being accomplished with precision, devoting four whole years to the task, without remuneration, but I have been well rewarded by the knowledge of facts. The conclusion I have arrived at is this: There is as vast a difference between the yellow race of bees, when pure and properly bred, and the blacks, as there is between the European and the African, notwithstanding the opposite views entertained by some; and seeing that man in his purity originated in Asia Minor, is it to be wondered at that this race of bees should also partake of some of those graces which man himself fell heir to? JOHN MCARTHUR.

That Foul Brood Act—Other Jottings.

I notice on page 268–9 of the American Bee Journal, under the heading, "The Ontario Foul Brood Controversy," that there is a difference of opinion as to the meaning of Section 3 of the Ontario Act. Now as I myself had the honor of making the original draft of that Act, I feel a little hurt that there should be any two opinions as to what any part of it means, because if there is one thing at all about the fruit of my quill in which I might feel disposed to take a little pride it is *clearness*—calling a spade a spade, and a crook a crook. And I venture to say that Messrs. Clarke and McEvoy would find nothing in that original draft to dispute about as to meaning;

but then, you know, it would never do to allow a plain Bill to go through the Legislative Mill without the usual dressing of legal verbiage, and ambiguous parliamentary terminology! The meaning originally intended to be conveyed by Section 3 was undoubtedly that which the Agricultural Department at Toronto has put upon it as set forth by the Deputy Minister of Agriculture, in the correspondence which appears on page 269. It was not intended that the inspector should be prohibited from destroying the diseased colonies in the absence of the owners or possessors.

As to the dispute between Messrs. Clarke and McEvoy, I can give no opinion further than to say this: That when charges of so serious a nature are made by either side, at the outset of the discussion and before there has been even a full presentation of the case, the editor who abruptly and peremptorily shuts down on his correspondents, takes upon himself a grave responsibility. In such a case it would appear to me that the editor, having already published the charges on both sides, which he need not have done, really owes the disputants themselves and the public generally a higher and graver duty than he owes the few readers of his journal who might object to hearing anything more on the subject from either party.*

THE WEATHER AND THE PROSPECTS.

It is now the first of June, and it has been very seldom we have experienced a spring so exceptional in character in Ontario. The rainfall since the disappearance of the snow has been very slight, and the alternating high and low temperatures have been as unusual as they have been unfavorable in their effects. There was no weather in this district of Ontario (and it was worse in some other parts) fit to remove bees from their winter quarters before about April 20; nor did those wintered outside fly to any extent before that time. A few warm, fine days, however, about that time gave them all the necessary cleansing flights, and put them in fairly good condition. Then followed cool weather up to May 4, when the temperature suddenly went up to the 90's and remained there for a week, giving the bees as well as all vegetation a tremendous impetus. Fruit-trees came from the starting bud to the full bloom in one week—a thing which may have happened here before but I never saw it. The temperature then went down again to near the freezing point through the day and below it at night, forming ice. And this lasted with but little variation till a few days ago, when the heat came down again in earnest.

The results of all this have not been very favorable either to the bees or the general face of Nature. Of course the bees not put in comfortable condition during the cold weather succeeding the hot, suffered severely in the chilling of brood, etc. As to vegetation, much damage was done. Fruit was much injured—especially grapes, peaches and strawberries. Meadows and trees are much damaged, and a young basswood orchard I have came in for a pretty bad scorching. The foliage of two splendid butternut trees I have, which were in bloom when the cold wave came, was quite destroyed, and they now look barren enough. I had raised them "from the seed," having planted the butternuts 30 years ago. It took them three years to sprout and they are rather slow growers. The basswood did not suffer so badly—some 75 per cent. of them escaping with but little injury.

Considering the ups and downs of the weather, the bees at this date (June 2) are in good condition—my own are, at any rate, though I am hearing of serious losses among the inexperienced. The clover promises very well, though all vegetation needs rain badly.

THE PRACTICAL BEE-KEEPER.

This young bee-paper, which maintained a creditable existence over here for a time, has, it is to be regretted, been absorbed by the older one. It was hoped that the "Practical" would in time develop into filling the bill of what an apicultural journal ought to be.

The editor of the surviving journal says, I notice, that one bee-journal is enough for Canada. He did not think so when, a few years ago, he started the Canadian Honey-Producer in opposition to the old Canadian Bee Journal. It soon died, however.

THE NORTH AMERICAN CONVENTION.

In the rapid flight of time with busy people (and we know bee-men are very busy people) September will soon be here, and we hope to meet as many of our cousins from across the line in Toronto as can possibly get there. They can see the great Industrial Fair as well as attend the joint bee-convention.

ALLEN PRINGLE.

Selby, Ontario.

[*With due deference to Mr. Pringle's opinion, I am quite sure that it is always best to "shut down" on any and every discussion when it clearly appears that there is to follow more disrespectful personal characterizations than legitimate argument. Had I known both sides of the case before publishing the first side, of course none of the personal controversy in question would have been permitted to appear in the American Bee Journal. As Mr. Clarke was not at all *named* in Mr. McEvoy's official report, he has only himself to blame for calling out the denunciations contained in a later article by Mr. McEvoy. As the Clarke-McEvoy personal troubles are of not the slightest interest to the public, and as they both had had their "say" in the matter under consideration, I felt justified in saying there would be no more of it in these columns.—ED.]

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Two Laying Queens in One Hive.

Were bees ever known to keep more than one fertile queen at one time in the same brood-chamber?

Long, W. Va. I. S.

ANSWER.—Oh, yes, often. A mother and daughter are sometimes found laying in the same hive, but generally not for a very long time, the mother being nearly played out. By saying "often" I don't mean you'll find them in every hive, nor in every year—perhaps one hive in 500—which isn't so very "often," is it?

Why Does Clover Bloom Yield Nothing?

How long does white clover have to be in blossom before it yields honey? I don't remember ever seeing white clover look as fine and plentiful as it does here at this date, yet my bees are not working on it, or on anything else to speak of, and all are in the best of condition. Is it not rather early for white clover, or is it on account of the warm weather we had in April? L. S.

Aurora, Ill., June 1.

ANSWER.—Exactly the same condition prevails here at Marengo now (June 3). Clover is out in full bloom, but the bees are doing nothing. True, there is great need of rain, but I don't believe the trouble is from lack of rain. I'm very anxious to be mistaken, however, for I'd a good deal rather say I was wrong in my opinion than go through another year of dead failure.

Clover is earlier than usual, but not very much. The very first bloom was very much earlier than I ever knew it, but then came about two weeks of cool weather, when it stood still. Why it is that clover yields nothing is entirely beyond my knowledge.

Hives Where Bees Died—Hive for Wintering.

1. I have quite a number of fine combs out of hives that the bees died in during the past winter and spring, but I find there are considerable dead bees and pollen in the cells. Do you advise removing it before putting the new swarms on them, or would you let the bees do it themselves?

2. I find in nearly every hive, both those that bees have died in and in those whose colonies are strong and in good condition, more or less granulated honey. I never fed anything, and the temperature never went below 38° in the cellar, and that for a very short time. What is the cause?

3. I find that nearly every colony I lost starved and died in clusters between the empty combs, whilst there was plenty of honey in the outside combs, but they would not move out to get it. My hives are the 8-frame Langstroth; they appear to be too shallow for our long, cold winters. What would you think of a hive say 22 inches long, 12 deep, and 9 wide, to contain 6 frames, so that the colony would occupy all the combs, and could work lengthwise and upwards, and not have

to change from one comb to another? This would give a hive with about the same number of cubic inches. Bees in this latitude have to be confined from 5½ to 6 months.

My bees are all blacks, but I intend to introduce some Italian blood this summer. W. D. L.

Frankville, Ont., May 29.

ANSWERS.—1. You'll probably find it pretty slow work to pick out dead bees. If you put the combs where mice can get at them, they may pick out the dead bees, but look out they don't also dig the combs to pieces. If you soak the combs and let them stand a day or two, the pollen will ferment and swell, and a fresh addition of water may clear out most of the pollen. If they are not very bad, give them to the bees just as they are. If the pollen is not spoiled it may be worth as much to the bees as honey. But if the combs are moldy and the pollen soured, the swarm may desert the hive. Better give one or two frames at a time to a strong colony (not a swarm) to be cleaned out. Or, put a hive full of the combs under a hive of bees, so the bees will have to go up through the empty combs, and they will clean them.

2. Some honey will hardly granulate at all, and some will granulate in the hive before winter. Just what makes the difference I don't know. The weather and the thoroughness of ripening may have something to do with it.

3. I doubt if you would like a hive of the proposed form. Better not try more than a single one at first. Some have wintered successfully in very shallow hives.

Does Flax Yield Honey?

Does flax-bloom yield honey? and can bees gather it? If so, what color is the honey? M. R.

ANSWER.—I'm sorry to say I don't known anything about it. Will some one who lives in a flax region please tell us?

A Swarm that Hived Themselves.

I had, in the spring of 1894, one good strong colony left out of three. That colony sent out the first week in June, 1894, a very large swarm of bees; they settled so high up on an apple tree that I could not hive them, so they went to parts unknown. The parent colony all died the past winter—not a bee was seen about the hive all this spring, until last Saturday, June 1. I was in my garden and heard many bees buzzing and flying about. I went to the old hive and there found that a large swarm of bees had taken possession. There are no bees nearer my home than one mile. Can they be part of the swarm that I lost in 1894? Or are they a new family? They appear to be at home. The old frames were left in the box until now. J. H.

Marietta, Ohio.

ANSWER.—Your unoccupied hive acted as a decoy hive, a swarm looking for new quarters found it to their liking, and made themselves at home. The swarm may have come from some place a mile or five miles away, or it may have come from some colony in the woods near by.

Increase—Rearing Queens.

I have three colonies of bees, two in chaff hives, and one in a single-walled hive. On April 13 I took frames from the single-walled hive and put them into the chaff hive, and they are doing all right. On May 10 one colony swarmed. I cut the swarm from a tree, and put it into a new hive, and put a super on full of sections. The next day I looked at them, and most of the bees had left, and went back in the old hive. What was the cause? Did I do right?

2. On May 18 I examined the colony that had swarmed, and found 5 queen-cells. I then took out 4 frames of brood, one with 3 queen-cells on it, and put them into a new hive. They seem to be all right to-day. Did I do right?

3. Can I take, say three frames of brood and put in a new hive without any queen-cells in them, with plenty of bees? Can, and will, they rear a queen? L. E. S.

Ewing, Nebr., May 20.

ANSWERS.—1. Bees are so freaky at times that it's hard to tell why they do certain things, but it is possible that in some way they were without a queen, and so returned to the old hive. A queen may be accidentally killed at swarming, or she may be unable to fly with the swarm. Your proceeding was all right, at least it was not the cause of the bees deserting the new hive, although it is generally preferred to have the swarm set on the old stand, the parent hive being set on a new stand.

2. There is some danger that you are dividing up too much. Under ordinary circumstances, unless you have an unusually good location for a long honey-yield, you will find that the mother colony will not build up any too strong for winter. When it is divided, as you have done, of course each part will be weaker then if left undisturbed, and you will need perhaps to feed and strengthen if you want to make sure of the two pulling through the winter.

3. They probably would rear a queen, for of course you would take with each comb its adhering bees, but many of the bees would return to the parent colony, leaving your nucleus very weak, and a queen reared by them would not be such as it would be profitable to keep. The queen is the most important factor in a hive, and it pays to be at great pains to have queens of the best sort. A queen reared in a full colony is none too good.

What Ails These Bees?

Last Friday afternoon I had a strong colony of Italian bees apparently in good condition. To-day (Monday) there is but a mere handful of discouraged looking bees, and without a queen. They are in a chaff-hive containing 10 Langstroth frames. I had been feeding them a little syrup made from granulated sugar, each evening to stimulate brood-rearing as fast as possible. They build up very fast, and two weeks ago had brood in eight frames, and bees covering well nine frames. Then the queen nearly stopped laying, and on Friday last there was but one little patch of eggs. They had plenty of honey in the hive, and have yet. I found larvæ in the cells without any food, and they looked as if they were starved to death. I do not understand why a strong colony should let the larvæ starve when they have plenty of honey in the hive.

The bees crawl out of the hive on the ground and finally die. When I first noticed it, the ground for several feet around the hive was covered with bees, and are that way yet. They keep crawling out in this way, one at a time, never to return. The hive-entrance and the ground in front of the hive is spotted with a yellowish substance, but was not noticeable the first day.

Is this dysentery? and what has caused it? The hive has been kept dry and warm, having a chaff cushion over the frames until the present time. Is dysentery the same as bee-paralysis? Is the so-called "nameless bee-disease" anything like this? J. W. P.

Omaha, Nebr., May 30.

ANSWER.—I must confess I don't know enough to answer, and should be glad if any one can give some light. Bee-paralysis and the "nameless disease" are the same thing, but different from dysentery. The spotting looks like dysentery, but bees don't have trouble with dysentery when they can fly freely. The crawling out of the hive is a little like bee-paralysis, but that disease doesn't make such rapid progress so far North as Nebraska. I might say it looks like a case of poisoning, but that's only another way of saying I don't know anything about it. I wish you would tell us how the case terminates.

Ten Weeks for Ten Cents.—This is a "trial trip" offer to those who are not now subscribers to the American Bee Journal. Undoubtedly there are thousands who would take this journal regularly if they only had a "good taste" of it, so as to know what a help it would be to them in their work with bees. In order that such bee-keepers may be able to get that "taste," the very low offer of "10 weeks for 10 cents" is made.

Now, dear reader, you cannot do a better service than to show this offer to your neighbor bee-keeping friends, and urge them to send on their 10 cents and get the next 10 numbers of the old American Bee Journal. In fact, *you* could afford to send the 10 cents for them, and then after the 10 weeks expire, get them as new subscribers for a year. They will be easy to secure then, for the 10 numbers will be a fair trial, and they will want the Bee Journal regularly if they are at all interested in bee-keeping.

Remember, it's *only 10 cents for 10 weeks*, to all not now subscribers to the Bee Journal.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

Mixed Bees—Chestnut and Corn-Tassel Bloom—Making Foundation and Hives.

1. I have the Italian and black bees, and if I were to get the Carniolan bees, and they were to mix with the other two races, what would be the result?

2. Do you think chestnut bloom and corn-tassel yield any honey? I do not think I ever saw a bee still enough on either bloom to gather nectar.

3. Is there any cheaper machine to make foundation than those mills from $15 to $40? Would it pay a man to get a machine and make his own foundation when he keeps from 50 to 75 colonies, and can get beeswax for 18 cents per pound?

4. If I were to get a contract to make from 100 to 150 hives, could I get some machine to rip the boards and square them without the handsaw and the square?

M. W. G., Bankston, Ala.

ANSWERS.—1. The result would be a *mongrel* variety of bees.

2. Not much honey—more pollen; yet I have known corn-tassel to yield honey in sufficient quantity for the bees to store in the surplus department.

3. I do not know of any. It would not pay you if you had any other business to attend to.

4. You can get a machine to do the work. The Barnes or the Seneca Falls machines are good. See their advertisements in this journal, and write to them for prices.

A Swarming-Time Experience.

DR. BROWN:—I have a colony of black bees which cast a swarm April 25. It was hived on the old stand, and the parent colony, after a day or two, was moved to a new location. About May 1 an after-swarm came out, which I caught in a swarm-catcher, when they immediately returned to the hive. The next day the same process was repeated.

On May 11 they came out the third time, and were hived, a frame of eggs being given them. In four days they had sealed queen-cells, showing that they were queenless. The parent colony, a few days after the swarm came out, was found to have a laying worker, so the two were united, and now have a virgin queen, and seem to be all right. Why did they swarm when there was no queen in the hive? What should I have done to prevent this state of affairs?

Brinkleyville, N. C. R. B. H.

ANSWER.—Such cases as Mr. H. describes do not often occur. Sometimes when bees are determined on swarming they become so excited, that, if the queen hesitates about going out with them, they will proceed to ball and kill her. In this way the queen was probably dispatched in the old hive. The operations with the swarm-catcher may have added to this state of affairs. It is generally supposed that a queenless swarm will return to the parent hive. They will more certainly do this if they discover the loss of queen before they settle; but if she is lost during the operation of hiving, they will often remain in the new hive, and will proceed to make queen-cells when brood is given them. Under the circumstances, I don't see how you could have done better.

Management of Transferring.

DR. BROWN:—Having within about a year become quite interested in bees, and although I am considerably on the shady side of 50, I find that I can learn, and have learned, a good deal about them in that time, and with the assistance of my family (who with myself up to that time looked at bees simply as things that stung and stored honey) have attained to such acts as transferring from common box-hive to Simplicity, and similar feats with considerable success, and from two colonies have in various ways attained to 15, and in good trim and working like beavers. Yet I often find "something else" coming up to learn about, and would like to see the following practice discussed in the Bee Journal, if not out of place:

In transferring from a very large box-hive full of comb, bees, honey, brood, etc., I found I could not get over two-thirds into a Simplicity hive. I was at a loss what to do, and concluded to fill, or nearly fill, two, and put one on top of the other. After a week or ten days I put a queen-excluder between the two, so as to ascertain which the queen was in, as being black bees she was hard to find; and after four days I looked them over and put the one that had the queen in, as shown by the eggs, on a new stand, with a board up in front to mark the location for the bees; and the part without the queen I put on the old stand. In a couple of days I introduced to it an Italian queen, and both colonies went right along in good order. Was it a good practice? In what was it deficient, and what are the dangers, if any?

The success of the above led to the query in my mind, Why not artificially "swarm" other colonies in the same way? Acting thereon, I have just manipulated a colony of Italians with the exception that seeing the queen I did not use the excluder; two or three frames had queen-cells on, one capped, the others not; the hive was very full, and I looked for them to swarm in a few days, and did this to prevent it. The queen with 5 frames of brood, honey, etc., and 3 frames of foundation I left on the old stand; the balance (7 frames of honey, brood, etc.) I put on the new stand, the frames having queen-cells being among them. They had increased them from 8 to 12 frames while they remained one over the other. In a day or two I propose to cut out queen-cells and introduce a laying queen. Is this all right? If not, what is wrong?

I forgot to say the hive on the new stand has plenty of bees, but as they come out and in very little, I suppose them to be nearly all young bees. Do you think this will hinder their swarming? C. E. M., Asheville, N. C., May 28.

ANSWER.—I see nothing objectionable in your plan; only in the second case, had you placed the part containing the queen on the new stand instead of the old, the force of working bees would have been better divided. After a bee emerges from the cell it takes some days before it can go out for forage.

Wants Extracted Honey—Several Questions.

DR. BROWN:—One year ago I purchased two colonies of black bees, and one of them swarmed the next day. I now have 9 colonies, but some are weak, being only divisions of colonies. Now for my question: How would you advise me to manage my bees for extracted honey? Our honey-resources continue almost the entire year, but at no time is there a very good flow, unless it be very early in the spring. I know of no bees near me in frame hives, but bees in box-hives generally gather more than they require to carry them through the winter.

I have 9 colonies now, and hope to increase to 20 next year, and after that I do not care for any increase. My first swarms this year were from April 8 to 10, containing 2½ or 3 gallons of bees.

Bees have been busy this year, first on fruit-bloom, and then red-bud, willow, rattan, locust, mustard, poison-vine, blackberry, and honey-dew. They are now working on sumac and buckwheat. Bitterweed will soon be in bloom, which yields somewhat until frost, but results in very bitter honey.

I timed the bees as they came in filled with honey-dew when they were working most, and the average of three minute tests on three colonies was 142, 170 and 195 bees per minute. Is this fast enough to depend on for honey, or should I have more bees per colony?

My bees are in 8-frame hives. Would you advise a different sized hive? Also, would it be better to have Italian than black bees? C. H., Bonham, Tex., May 30.

ANSWER.—For a location like yours, where there is a continuous but no great rapid flow of honey, I should prefer a 10 or 12 frame one-story hive, and extract from the outside frames; but as you have the 8-frame hive, I should place on top a *half*-story with half frames.

From your report, your bees would seem to be sufficiently strong, and if they don't store any honey, it will be because there is none to gather.

That New Song—"Queenie Jeanette"—which is being sung everywhere, we can send you for 40 cents, postpaid, or club it with the American Bee Journal for one year—both for only $1.10. Or, send us one new subscriber for a year (with $1.00), and we will mail you a copy of the song free.

The American Bee Journal
ESTABLISHED IN 1861
OLDEST BEE-PAPER IN AMERICA

George W. York, - - Editor.

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Editorial Budget.

Don't Wait till after your best friends have passed away before speaking a kind word to or about them, or doing them a kindness. Better give some flowers now, rather than to save them all for the funeral.

The Bee-Keepers' Educational Society of Rhode Island will hold its next meeting on Friday evening, June 21, at 8 o'clock, at No. 21 Custom House Street, Providence, R. I. Mr. Samuel Cushman will read an essay on the "Relation of Bees to Fruit and Flowers." It is expected that Mr. J. E. Pond will be present. All are invited to attend. Mr. W. G. Gartside, is the Secretary, and his address is 295 Globe Street, Providence.

The Good Old Times seem almost to have come to the region of Higginsville, Mo., for Bro. Leahy in the Progressive Bee-Keeper for June speaks very encouragingly in the following editorial paragraph :

We are now having plenty of rain—apparently just enough. White clover is in full bloom, and we are sure of a good honey crop this year ; in fact, part of it is in the hives already. It is almost like the good old times—at least it reminds us of them—when the land, as it were, flowed with milk and honey.

Somnambulist says in the June Progressive that (s)he believes (s)he must be a "veritable Somnambulist." I can hardly believe it, for real "sleep-walkers" often meet with accidents during their nocturnal meanderings, and so far Sommy has been able to keep right side up without a slip. Some have wondered who Somnambulist is. I don't. 'Cause why? Why, Dr. Miller told me *he* knew. He said Somnambulist reads the Bee Journal. I turned right to the list, and sure enough, right there is the name and address. This evidence can't be nullified, even if the real name isn't "Somnambulist."

A Foreign Invitation.—I am glad to acknowledge the courtesy of Mr. F. Liedloff, the able editor of Leipziger Bienenzeitung, in sending me an invitation to attend the 40th convention of the German, Austrian and Hungarian Bee-Keepers' Association, which occurs Aug. 10 to 18, at Leipsic, in connection with an exposition. What a grand time they will have with such great numbers in attendance as we never dream of in this country. We have much to learn from our German brethren, particularly along the line of bee-conventions. I trust the gathering referred to above will be as profitable and enjoyable as it will be large and enthusiastic.

How to Make Honey-Vinegar.—Mr. Chas. F. Kehn, of Iowa, requests that the manner of making honey-vinegar be again given in the Bee Journal. At the risk of being charged with too frequent repetition, and yet on account of the many comparatively new readers of the Bee Journal, the following, by Chas. Dadant & Son, on the subject of honey-vinegar, is reproduced :

It takes from 1 to 1½ pounds of honey to make one gallon of vinegar. Two good authorities on honey-vinegar, Messrs. Muth and Bingham, advise the use of only one pound of honey with enough water, to make each gallon of vinegar. We prefer to use a little more honey, as it makes stronger vinegar, but the weaker grade is more quickly made. If the honey-water was too sweet, the fermentation would be much slower, and with difficulty change from the alcoholic, which is the first stage, into the acetic. This change of fermentation may be hurried by the addition of a little vinegar, or of what is commonly called vinegar mother.

If honey-water, from cappings, is used, a good test of its strength is to put an egg in it. The egg should float, coming up to the surface at once. If it does not rise easily, there is too little honey. As vinegar is made by the combined action of air and warmth, the barrel in which it is contained must be only partly filled, and should be kept as warm as convenient. It is best to make a hole in each head of the barrel, about four or five inches below the upper stave, to secure a current of air above the liquid. These, as well as the bung-hole, should be covered with very fine wire-screen, or with cloth, to stop insects.

A very prompt method consists in allowing the liquid to drip slowly from one barrel to another, as often as possible during warm weather.

As we make vinegar not only for our own use, but also to sell to our neighbors, we keep two barrels, one of vinegar already made, the other fermenting. When we draw a gallon of vinegar, we replace it with a gallon from the other barrel.

Brimstoning Hives with Combs.—Mr. B. Taylor, in the Farm, Stock and Home, gave this method of treating hives in which the bees had died during the winter, to prevent the destruction of the combs by the moth :

The hives containing combs from dead colonies I piled four or five high, and brimstoned every ten days until used. I did this by setting an empty hive-body on top of the piles, in this placing an old milk-can with something under it so as not to burn the combs below, then burning some rags which have been dipped in melted sulphur in the pan, covering all tightly with a sheet of tin or other metal.

Editor Holtermann says in the Canadian Bee Journal that he "would hardly care to see women in parliament." He was commenting on an editorial in this journal on page 268, where I said I was "willing to give the women a chance to try their hand at doing justice" to the pursuit of apiculture when the "men" had failed so to do. I still feel that not much of real help to any good cause need be expected from wire-pulling politicians, so I'm not disappointed when they do nothing. Best way is to send *genuine workers* to the legislature and parliament, and not politicians.

Value of Bees to Orchardists.—In the Ohio Farmer of recent date a correspondent in Portage county, Ohio, gives a short account of "one season with bees," in which, after telling how he manipulated them, he says this of their great importance to those interested in orchards :

While the income in honey was probably sufficient to well repay us for the time and expense placed upon the bees last year, we are far from believing that this is the only benefit that we have received from them. They stood just in the edge of our six-acre apple-orchard, from which I took last year more than 600 bushels of apples. A friend who was in the orchard while we were picking, remarked : "You may credit this large crop of apples to your sheep that have fertilized the soil, and to your bees which fertilized the blossoms."

A farmer and orchardist living in an adjoining township, said: "I want to get three or four colonies of bees, place

them in my orchard and let them take care of themselves. For a good many years I had a neighbor who kept a number of colonies of bees, and I always had a good crop of fruit. About five years ago he moved away, and since then there have been no bees nearer than two miles from me. I have not had a decent crop of fruit since. Last year my apple orchard of 20 acres did not yield 200 bushels." This gentleman's orchard stands upon a considerable elevation, underlaid with sandstone—a position generally believed to be peculiarly fitted for fruit-growing.

These statements go to show the line in which popular opinion is tending in regard to the aid which bees give in the proper fertilization of the fruit-blossoms. Scientific investigations, as well as careful observations, have shown that this opinion is the correct one. While there are seasons when the weather is such that the bees cannot work upon the blossoms, and we get but a small amount of fruit, the quantity any year would be very small indeed if it were not for the bees and their work. Let us give these useful insects full credit for this benefit, as well as for the sweet which they collect for us.

Make the Best of Circumstances.—Mrs. A. L. Hallenbeck, in the May number of the Progressive Bee-Keeper, closes her "Nebraska Notes" with this chunk of wisdom, which should be memorized:

Circumstances have brought home to my mind lately the fact that in whatever walk in life we may be situated, it is well for us to learn to make the best of circumstances; to take whatever of good or value we may have at our disposal, and make of it the most we can. It may be far from what we would prefer, and seem scarcely worthy of our notice; still, while we earnestly try to do our very best, the unwished-for duty may grow to be a holy work of love, and the dusty, tedious sands we tread in our daily toil may hold for us riches far greater than those we had hoped to gain by climbing heights for which we longed, while the coveted treasures for which we thought to travel far, we find lying at our very feet.

A California Bee-Story.—We find the following in one of our exchanges, which may cause some of the readers of the Bee Journal, who live near "probably the largest bee-hive in the world," to investigate and report:

Probably the largest bee-hive in the world is that at Bee Rock, Calif. The rock is, in fact, itself the hive. It is a granite boulder rising abrutly from the bed of a little affluent of the Arroyo Alcade, and it is seamed and scored with fissures of divers sizes, whose depths have never been sounded. They are all inhabited by a vast population of bees, and overflow with honey. It is impossible to estimate the quantity stored in the hidden recesses, and it is needless to say that nobody would be bold enough to explore. It is not without considerable peril that honey-hunters rifle the bees of that which appears at the edge of and outside the fissures, and that comes to many hundred pounds' weight every year.

Bleaching Beeswax.—In reply to a question about bleaching beeswax, an exchange says this:

Beeswax may be bleached by melting it, and for every pound adding two ounces of pulverized nitrate of soda and one ounce of oil of vitriol diluted previously with eight ounces of water. While the latter is gradually poured in, heat is applied, and the mixtures swells greatly, necessitating a large vessel. On cooling, the wax gathers on the surface.

Those who have the opportunity, might try this on a small scale, and report the outcome.

Honey as Food and Medicine.—A new and revised edition of this 32-page pamphlet is now issued. It has 5 blank pages on which to write or paste recipes taken from other sources. It is just what its name indicates, and should be liberally distributed among the people everywhere to create a demand for honey. It contains a number of recipes on the use of honey as food and as medicine, besides much other interesting and valuable information. Prices, postpaid, are: Single copy, 5 cts.; 10 copies 35 cts.; 50 for $1.50; 100 for $2.50. Better give them a trial. Send all orders to the Bee Journal office.

Among the Bee-Papers

Conducted by "GLEANER."

GETTING WORKER-COMB BUILT.

An experience of more than 25 years along this line has proven to me that bees cannot be depended upon to build worker-comb during the first week after being hived, if there is any completed comb in the hive at the time of the hiving of a prime swarm. With second or third swarms the case is different, as bees are more apt to build worker-comb with a queen when she first commences to lay, and only unfertile queens accompany these latter swarms; and in this case the queen does not commence to lay till the bees are fully accustomed to their surroundings. My advice to all is, use only starters in the frames in hiving swarms, or else fill all frames with foundation, or give all frames filled with combs.—Doolittle, in Gleanings.

FORM OF HIVE.

S. E. Miller, in Progressive Bee-Keeper, refers to the different opinions as to form of hive—shallow, deep, square, etc.—and then turns to see what the bees prefer in their natural state. Generally they select a cylindrical cavity in the forest, and it "may be from four to twelve inches or more in diameter, and from two to six feet or more in length, and it seems to matter very little whether it stands perpendicular or lies horizontally. The bees will adapt themselves to the form of their abode, and probably rear as much brood and store as much honey as they would in a modern hive, provided all other conditions were the same. Thus it would seem that the honey-bee was created to adapt itself to surroundings instead of the circumstances having to adapt themselves particularly to the bee!" So he concludes the form of the hive doesn't particularly matter, so far as the bee is concerned.

ORIGIN OF 5-BANDED BEES.

I see I failed to make myself understood where I said that "all of the yellow bees of to-day, having Italian origin, came directly or indirectly from either Mr. Hearn or myself." In this I did not claim all of the 5-banded bees, only those of *Italian* origin. Mr. Swinson, of South Carolina, and others, produced bees showing five bands fully as soon as either Mr. Hearn or myself, but these bees came from a mixture of Cyprian, Syrian, and other bees, with no claim that they were aught else. Why I made the claim that I did, as to the origin of the very yellow ITALIAN bees, was from the fact that I have written to nearly all those claiming to have very yellow Italian bees, who had not purchased queens direct of us, and upon their giving the source from whence their yellow bees came, I found that this *source* was those who had purchased of either Mr. Hearn or myself. Thus I said "directly or indirectly."—G. M. Doolittle, in Progressive.

TANGING BEES.

Practical bee-keepers nowadays generally condemn as useless the practice of making a noise of any kind to induce a swarm of bees to settle when inclined to abscond. But now comes no less practical a bee-keeper than S. T. Pettit, defending the practice in Canadian Bee Journal. As apparatus he uses two good cow-bells. He says:

"For handles I used stiff leather, like harness tugs. With a bell in each hand and an even start we have not once in about 15 years failed to save absconders, and we have had many severe tests.....Always have the bells ready at hand. The trained eye can generally detect the intentions of the bees before they start. Now just as soon as you see the course they are after, step right in front of the leaders and open fire. Now, mind you, there must be no cessation or slacking, no, not for a single moment; the job must be energetically and well done, and victory is sure. During the operation you must keep your eye upon the leaders, and if they veer to go round you, keep in front of them—in fact, you must keep ahead of all the bees. Some few stubborn swarms may drive you 40 rods or more, but such cases are unusual."

RENEWING QUEENS.

Doolittle says in Gleanings that he has found that three-fourths of the superseding of queens takes place during the three weeks immediately after the basswood, the main honey-flow. So he takes advantage of this to replace objectionable queens or those more than a year old. He says:

"To this end I start a greater number of queen-cells than

usual, from five to eight days before the expected close of the basswood honey harvest; and when these cells mature, hunt out the old queen and dispose of her, giving a mature cell 24 hours after having removed the old queen. If cell-protectors are used, the cell can be given at the time of removing the old queen, thus saving once opening of the hive; for, as a rule, the bees allow a queen to hatch all right where a cell-protector is used."

If the queen is to be replaced only because the new one is younger, and the bees kill the young one instead of the old one, then he concludes it is all right, as the bees know their business and will not keep a queen that is likely to play out.

But notice this manner of Italianizing or renewing queens must be *after* and not before the honey harvest, for if tried early the young queen will generally be killed.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Ignorance in the Name of Science.—"After two or three years of laborious existence the bee dies."

"A hive often produces from 12 to 20 pounds of honey each year, and a proportional quantity of wax."

"The European bee has been acclimatized in America, but it soon returns to its wild state, as indeed do all our domestic animals when tempted to another hemisphere."

"By means of the physical education and the special nourishment they give them, queens are made from larvæ."

"The lives of the males are spared in those hives which, instead of a true queen, have only a female half (?) impregnated."

The above quotations are all taken from a translation of a French writer, Figuer, who was born in 1819, and who has devoted his life to the study of scientific subjects. More, I find this book in our public library, presumably placed there as an authority on entomology. Is it any wonder the editor of the Cosmopolitan made the head-lines (which he had the presumption to add to Mr. Hutchinson's excellent article) bristle with the male gender? The world "moves," but sometimes I am inclined to think it moves *very slow*, and that some people who "know a heap," know very little after all.

The Best Hive for Winter.—"I have lost all of my bees of six colonies in single hives [frames hives, I conclude] and one in a Well's hive, while two skeps (colonies) of my own and two of my neighbor's are apparently in good condition."....."I am not, a 'skepist,' but my belief in the excellency of the skep for wintering is confirmed."—A. P. J., in British Bee Journal.

"The colonies in skeps also are alive and hard at work now, appearing to be somewhat stronger than those in frame hives."—Geo. Brealey, in British Bee Journal.

It would be interesting to know how many have had a similar experience, not only in England, but all over the world. It may come to pass after all that the hive does have something to to do with the success of the bee-keeper, especially when that hive is so constructed as to interfere with the natural condition of things. I would be glad if the box-hive people would report to me or the editor, and let us know how their bees came through the winter. Of course there are many things to take into consideration, but such a report might cause us to revise some of our ideas and methods.

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10A13t *Mention the American Bee Journal.*

Doctor's Hints

By DR. PEIRO, Chicago, Ill.
100 State Street.

The Azure-Blue Sky.

It is the sun shining through the *dust* floating in the air that imparts to the sky the beautiful azure blue we all so much admire. There is only this dust between us and the sun.

Dust and Light.

What we actually see in a streak of sunlight entering a dark place, like a cellar, is the glint of the sun on the particles of dust the air contains. But for the dust, there would be little light.

When Microbe Meets Microbe.

The virulence of typhoid fever microbes has been largely exploited. Now comes Dr. Rumpf, who has cultivated another microbe that cures typhoid fever in eight days. In words more intelligible to boys, Dr. Rumpf "sicks" his microbe on Dr. Fraenckel's microbe, and the latter is whipped!—and typhoid fever is cured. It is only repeating what I have said before, that microbes in the system are like the fish in the sea—they feed upon each other.

Too Vivid Imaginations.

It seems to be the special mission on earth of some people to enlarge upon the dangers that are supposed to surround us. If a neighbor takes sick he's sure to die! Any eruption of the skin is magnified into a contagious disease; the least sore throat is diphtheria, and so on—to set everybody's nerves on a tension. Usually such romancers know nothing of the conditions that actually exist. They simply have a morbid desire to see people alarmed. Keep a large grain of salt for their benefit!

FOUR OF A KIND.

A certain railway official wrote the officers in charge of fencing on four great Railroads, where "the Page" is in use, asking their "honest opinion" as to its value. He considered the answer so very favorable that he gave a large order for the Road he represented. The replies were confidential, but he stated that the strongest endorsement came from where "the Page" had been longest in use. If farmers took such precautions, those who furnish "cheap" wire fences would go out of business.

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T. R. CANADY,

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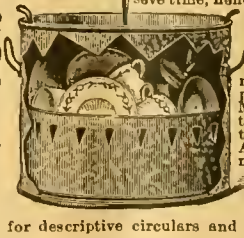

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Leininger Bros., Fort Jennings, Ohio.

22A5 *Mention the American Bee Journal.*

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Had you noticed that we have a bee-journal in the South? Well, we have. Send us $1.00 and receive "THE SOUTHLAND QUEEN" one year. Fresh, Practical and Plain. Jennie Atchley begins a Bee-Keepers' School in it June 15.

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GOLDEN QUEENS Solid Yellow, $1; Yellow to tip, 75c.; darker 60c. Tested, $1 to $2. Breeders, $3. Best, $5. Samples of Bees, 2c. None better for Honey, Beauty and Gentleness. Ready now. Fully guaranteed. F. C. MORROW, Wallaceburg, Ark.

20A13 *Mention the American Bee Journal.*

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We have finally succeeded in finding a Paste that will stick labels to tin, glass, etc.—just thing bee-keepers have wanted. It will do the business wherever any "stickum" is required. It is guaranteed to do the work. It is put up ready for immediate use, in the following size packages, and at the prices given, by express: ½-gal., 70c.; 1 gal. $1.00; 2, 3, 4 or 5 gals., 75c. per gal. It weighs about 8 lbs. to the gallon. Sample of Paste, postpaid, 25c. Address all orders to—

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Send for Price-List } BEES AND QUEENS For Sale.

21A17 *Mention the American Bee Journal.*

YELLOW TO THE TIP— Are the Italian Queens that I can send by return mail at $1.00 each or six for $5.00. Not one in 100 will prove mismated, and any that do not produce three-banded Bees will be replaced. Tested Queens after June 15th, same price as above.

W. H. PRIDGEN,
22A5 CREEK, Warren Co., N. C

Mention the American Bee Journal.

General Items.

Good Honey Crop Expected.

My bees are doing well this spring. I started last spring with 8 colonies, and now have 24. I have just put the supers on. This year is favorable for a good honey crop here in California.

I think the American Bee Journal just the thing for any one having bees.

Fowler, Calif., May 25. A. W. WARD.

Rolling in the Honey.

The bees are just rolling in the honey from the poplar and Alsike clover. There is a good prospect if it rains soon. It is very dry here, as we have had very little rain since April. The bees filled their hives from the fruit-bloom, and put some in the sections.

I tried a small lot of Italian clover. It commenced to bloom the first of May, between fruit-bloom and clover. It is just the thing for bee-keepers.

The bees wintered badly. I have 16 colonies out of 32. WINCHESTER RICKEL.

Burket, Ind., June 3.

Best Flow in 10 Years.

Bees wintered well here the past winter, and there has been a splendid honey-flow this spring—the best we have had for 10 years.

Bees have swarmed well, but I have had bad luck with mine, having saved only 15 swarms from 21 old colonies, some uniting and some going to the woods. I hived a swarm six weeks ago to-day, in an empty box-hive; now it is full of honey, and they have swarmed.

We are having fine weather now, much to the delight of everybody.

Grifton, N. C., June 3. B. H. IVES.

The Way I Manage My Apiary.

I winter my bees in a cave. I take them out when the maples are in bloom. The next day, if it is warm enough, I look over each colony, clip each queen's wing, if not clipped, and then I give each colony a clean hive. If they need feeding I put on a double hive, and then two chaff cushions; take a quart or half-gallon Mason jars filled with syrup, tie a cloth over the mouth of the jar, and invert it on the frames between the chaff cushions, then take pieces of carpet, or any other material, and put it over the jars to keep the brood warm. I don't have to disturb the colonies to feed them. I take off the cover and raise the cloths, when I can see if the jars are empty, and replace them with full ones, so the brood is never chilled. I leave the cushions on till cold nights are over.

When a colony swarms, I have a little queen-cage, and I pick up the queen when she hops out and cage her. I put this cage on top of a hive that I want them to go in. In less than half an hour they will find the queen and begin to come down on the hive. Then I put the cage at the entrance, and they will go in. I then open queen-cage

GOLDEN QUEENS From Texas.

My Bees are bred **For Business,** as well as for **Beauty** and **Gentleness.**

☞ Safe arrival and reasonable satisfaction guaranteed. Write for Price-List.

Untested, 75c—Warranted, $1.

J. D. GIVENS, LISBON, Box 3 TEX.

10A26 *Mention the American Bee Journal.*

✲ BEST GOODS ✲

At **lowest prices** are what we are all after. The **QUALITY** of Cary's Goods has never been questioned. His XX White Thin Foundation and Polished 1-Piece Sections are the Finest on the market. His

BEES and QUEENS

are from the best strains, and reared and shipped in the way that long years of experience have shown to be the best.

He has the largest Stock of

BEE-KEEPERS' SUPPLIES

in New England; and as to Prices, you have only to send for a Catalog and compare them with those of other dealers.

☞ To those living in the East, there is the still further consideration of low freight rates Addresss,

W. W. CARY, COLRAIN, MASS.

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UNTESTED ITALIAN QUEENS.

Reared from a Queen valued at $50. Can't be excelled as honey-gatherers; 75 cents each. Address

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22A5 FORT DEPOSIT, ALA.

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Untested, July to Oct., 75c. each—3 for $2.00.
Tested Queens, $1.00 each.
By return mail. Satisfaction Guaranteed.
Send for Free Illustrated Circular to

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22A5 18 Fulton St., CANTON, OHIO.

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The American.

STRAW HIVE Latest and Best.
Perfectly adapted to Modern Bee Culture.
Illustrated Circular Free.
HAYCK BROS., QUINCY, ILL.

19A8 Please mention the Bee Journal.

GARDEN CITY, Kan., May 13, 1895.
P. J. THOMAS, Fredonia, Kan.—

Honor to whom honor is due. The Queen you sent me proved the best out of six I bought from different Breeders.

J. HUFFMAN.

Big Yellow Golden Italian Queens 75c

Three for $2.00. Three-banded, same price. 1-Frame Nucleus, with Untested Queen, $1.75 2-frame, $2.25. Satisfaction guaranteed.

P. J. THOMAS, Fredonia, Kan.

Mention the American Bee Journal. 22A5

GLOBE BEE-VEIL

By Mail for $1.00.

A center rivet holds 5 spring-steel cross-bars like a globe to support the bobinet Veil. These button to a neat brass neck-band, holding it firmly. It is easily put together; no trouble to put on, or take off. An absolute protection against any insect that flies. Will go over any ordinary sized hat; can be worn in bed without discomfort; fits any head; does not obstruct the vision; folds compactly, and can be carried in the pocket; in short, it is invaluable to any one whom flies bother, mosquitos bite, or bees sting.

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

Italian Queens

Warranted Purely Mated, 50 cts. each. Tested, 75 cts., or 2 for $1.00; 12 for $5.00 Good Breeders, $2.00 each.

F. A. CROWELL,
24A5t GRANGER, Fillmore Co., MINN.

Mention the American Bee Journal

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—FROM IMPORTED MOTHERS—

I have got 50 Fine, Choice, Select Breeding Italian Queens—$1.25 each: Untested, 50 cts. About 10 out of every 12 will make fine tested Queens. List Free. **L. E. EVANS,**
24E4t ONSTED, Lenawee Co., MICH.

Mention the American Bee Journal.

Orange-Blossom, Alfalfa or Sage
HONEY
For Sale Cheap.

15Dtf **C. W. Dayton, Florence, Calif.**

Globe Bee Veil
By Mail for One Dollar.

Five cross-bars are rivited in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through.

It is easily put together and folds compactly in a case, 1x6x7 inches, the whole weighing but 5 ounces. It can be worn over an ordinary hat; fits any head; does not obstruct the vision, and can be worn in bed without discomfort. It is a boon to any one whom flies bother, mosquitos bite, or bees sting.

☞ This Veil we club with the Bee Journal for one year—both for $1.75; or give free as a Premium for sending us 3 New Subscribers to the Bee Journal at $1.00 each.

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

"Northern Bred Queens"
Our Northern Bred Gray Carniolans and Golden Italian Queens Produce Hardy Bees that Winter Successfully.

We make Queen-Rearing a Specialty. We never saw Foul Brood or Bee-Paralysis.

Don't fail to send for **Our Free Descriptive Price-List.**

Our Prices Are Away DOWN

F. A. LOCKHART & CO.,
17D LAKE GEORGE, N. Y.

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BERKSHIRE, Chester White, Jersey Red and Poland China PIGS. Jersey, Guernsey and Holstein Cattle. Thoroughbred Sheep, Fancy Poultry, Hunting and House Dogs. Catalogue.
W. SMITH, Cochranville, Chester Co., Penna.
13D26 *Mention the American Bee Journal.*

Write to Wm. H. Bright—

For prices on all Improved Bee-Fixtures—
Hives, Sections, Comb Foundation, Brood-Frames, Extractors, etc.,
At Bottom Prices.

Golden Italian Queens $1.00 each, Free Price-List.
Wm. H. Bright, Mazeppa, Minn.
19Dtf Please mention the Bee Journal.

and let her run in. That is all the trouble I have with the first swarm.

If I want to double them up, I cut out all queen-cells of a hive whose colony has swarmed, then I proceed in the same way as I did at first; but they will fight. So I wet a cloth in water and pour on a few drops of carbolic acid, and push it up in one corner of the entrance, and they will quit fighting.

I sometimes have two or three swarms in the air at once, but I cage each queen and put her where I want her to go, and in a short time each will hive itself. All I have to do is to wait until they go in, so I can hive their queen. I have tried this for five or six years, and never have any trouble.

I never have but 26 colonies when fall comes. I always cut out all queen-cells of each colony the eighth day. I have never lost one swarm since. I have been in the bee-business 12 years. I am 58 years old, and I always take care of the bees. I have 22 colonies. I don't know of more than one dozen colonies in 15 miles besides mine. All have starved to death. I bought 600 pounds of sugar in the last year for my bees. I have never lost but two colonies in the cave in the 12 years. I tier them up in the cave with all the covers off, with a cloth over them. I put away 20 colonies last year, and took out 19. I had 6 swarms this month. MARY W. LOWN.

Coin, Iowa, May 28.

Bees in Pretty Good Condition.

I have 48 colonies of bees in pretty good condition. I lost 8 through the winter and spring. I have had only one swarm so far.
N. SANDERS.

Greensboro, Ind., June 7.

Having a Protracted Drouth.

We are having a protracted drouth—no rain to speak of this spring. The white clover and pastures are drying up for want of rain. ALVE WORTMAN.

Monticello, Ind., June 3.

Outlook Not Bright.

Last year's drouth killed all the white clover except a very little along the wet ground, consequently we have nothing to depend upon except the linden, which kept our bees from starvation last year, and perhaps it may again, but the outlook is not bright. O. B. BARROWS.

Marshalltown, Iowa, June 7.

A Good Deal of Hard Luck.

We commenced bee-keeping five years ago with 20 colonies, or rather six years ago with one, which we found on a sumac bush while raspberrying in Wisconsin one day. My husband got it into a cracker-box, tied my shawl around it, and carried it home in his lap while I drove the team. We have now about 60 colonies, which wintered splendidly, but they do not pay as well as they might if they had more care, for we rent a large farm and keep only one hired man.

I have been an invalid for the past five years, confined to my bed nearly all the

COMB FOUNDATION.
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Quality always the best. Price always lowest.

Working Wax into Foundation by the lb. **a Specialty.** I can make it an object for you in any quantity, but offer special inducements on straight 25 or 50 lb. lots. Or for making large lot of Wax into Foundation. I am furnishing large Dealers, and can also please you. **Beeswax taken at all times.** Write for Samples and Prices, to

GUS DITTMER, AUGUSTA, WIS.
Reference—Augusta Bank. 16Atf
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BEFORE placing your orders for SUPPLIES, write for prices on 1-Piece Bass wood Sections, Bee-Hives, Shipping-Crates Frames, Foundation, Smokers, etc.

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NEW LONDON, WIS.

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Control Your Swarms, Requeen, Etc.

Send 25c. for samples of West's Patent Spiral Wire Queen-Cell Protectors, and Patent Spiral Queen Hatching and Introducing Cage; & best Bee-Escape, with circular explaining. 12 Cell-protectors, 60c.; 100, $3. 12 cages, $1; 100, $5, by mail. Circular free. Address, **N. D. WEST, Middleburgh, Schoharie Co., N. Y.** Sold also by all leading supply-dealers. 22A5

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Golden Italian Queens.

One Untested Queen	before June 1st			$1.00
Six "	"	"	"	5.00
One "	"	after	"	.75
Six "	"	"	"	4.20
One Tested	"	before	"	1.50
Six "	"	"	"	7.50
One "	"	after	"	1.00
Six "	"	"	"	5.00

One Selected Tested for breeding, $3.00.
Price-List Free.

W. H. WHITE,
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PATENT WIRED COMB FOUNDATION
Has No Sag In Brood-Frames

Thin Flat-Bottom Foundation
Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook Montgomery Co., N. Y.

IMPORTED Italian Queens reared this yr., $3.50 each. Tested Queens—**Breeders**—$1.50 to $2.00 each.
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Queens
Either 3 or 5 Banded, 75c. each; 6 for $4.25. Give me a trial. I can please you. Catalog free.
Chas. H. Thies,
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Send for Circulars and Prices, to

T. F. BINGHAM, ABRONIA, MICH.
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NUCLEUS Colonies, Italian Queens, Bee-Supplies. G. M. Whitford, Arlington, Neb
24A4t *Mention the American Bee Journal.*

Honey & Beeswax Market Quotations.

CHICAGO, Ill., June 7.—We have our usual dull season which we look forward to and expect. Honey is entirely forgotten during the months of June, July and August. The market is pretty well cleaned up of all grades of honey, so the prospects are encouraging for the coming season. We are getting 13@14c. for light comb. J. A. L.

KANSAS CITY, Mo., June 3.—We quote: No. 1 white comb honey, 1-lbs., 13@14c.; No. 2, 11@12c.; No. 1 amber, 10c.; No. 2, 8c. Extracted, white, 7c.; amber, 6c.; dark, 5c. Beeswax, 22c. C. C. C & Co.

CHICAGO, Ill., May 23.—The trade in comb honey is very light at this time of the year—as it is between seasons. Soon we will get the new crop, and it will come on a bare market. Just now what little comb sells brings 14c. for the best grades. Extracted, 5½@7c. All good grades of beeswax, 30c. R. A. B. & Co.

CINCINNATI, O., June 8.—Demand is slow for comb honey at 12@16c. for best white. There is a fair demand for extracted honey at 4@7c.

Beeswax is in good demand at 25@31c. for good to choice yellow. C. F. M. & S.

PHILADELPHIA, Pa., May 18.—Comb honey is in poor demand. Large stores are now waiting for the new crop. Extracted is in fair demand. Beeswax has declined some, but good sales keep market from being overstocked. We quote: Comb honey, 9c. Extracted, 4½@6c. Beeswax, 29@30c. W. A. S.

NEW YORK, N. Y., May 24.—White comb honey is well cleaned up. Considerable buckwheat remains on the market, and, as the season is about over, some of it will have to be carried over. Extracted is doing fairly well, with plenty of supply to meet the demand. New southern is arriving quite freely. We quote: Extracted, white, 6@6¼c.; amber, 5@5½c. Southern, common, 45@50c. per gallon; choice, 60@65c.

While beeswax holds firm at 31@32c., we think it has reached top market and do not expect it to go higher. H. B. & S.

MUTH'S HONEY EXTRACTOR PERFECTION Cold-Blast Smokers,

Square Glass Honey Jars, Etc.

For Circulars, apply to CHAS. F. MUTH & SON. Cor. Freeman & Central Aves., Cincinnati, O. Send **10c** for Practical Hints to Bee-Keepers.

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List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

J. A. LAMON, 43 South Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 120 & 122 West Broadway.
CHAS. ISRAEL & BROS., 486 Canal St.
I. J. STRINGHAM, 105 Park Place.

Kansas City, Mo.

C. C. CLEMONS & Co., 423 Walnut St.

Buffalo, N. Y.

BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

Philadelphia, Pa.

WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

A Grand Bee-Smoker is the one offered by W. C. R. Kemp, Orleans, Orange Co., Ind. It has a 3-inch fire-barrel, burns all kinds of fuel, and is simple, efficient and durable. Send 100 cents for a sample smoker, and you will have a rare bargain.

time until the past year I have been gaining slowly. We seem to have had rather more than our share of hard luck during that time. My husband had his hand badly torn to pieces in a circular saw; the barn burned with 150 tons of hay, etc., and altogether it has been pretty hard to make both ends meet, and sometimes they did not quite meet. But I am getting better, and we are hoping for better times. I hived two swarms of bees while my husband was away lately. We enjoy reading the American Bee Journal very much indeed.

MRS. J. H. WHITCOMB.

Waconta, Minn., June 6.

Labrador Tea—The Kingbird.

I send a branch from a plant that grows in this country. I wish to know its name, and whether it will furnish any honey for the bees.

We have here a brown bird with a small top-knot that watches for and catches the bees. It does not eat them, but pinches the honey out of them. Do you think they will do any harm?

MRS. MATE WILLIAMS.

Nimrod, Minn., May 20.

[Prof. Burrill replies to the foregoing as follows:—EDITOR.]

The plant is called Labrador Tea (*Ledum latifolium*). It is nearly related to the rhododendrons and azaleas of the eastern portions of our country. I know nothing of its honey-producing qualities.

The bird is probably the kingbird, well known for its habit of killing bees and chasing large birds, like hawks and crows. There is no doubt but that the bird does injure the bee-keeper's business.—T. J. BURRILL.

Wintered First-Rate.

I have 16 colonies of bees in Chautauqua double-walled hives, and they wintered first-rate, only one being lost during the winter. I run for comb honey, only it was so dry that I did not get much surplus last year. The Bee Journal is a welcome visitor.

Jamestown, N. Y. EDWIN WARD.

Cold Weather Injured Clover.

My bees came through the winter with a loss of 6 colonies (went into winter weak), leaving 27 that were all right. They built up finely on fruit-bloom, and began swarming. They were booming strong May 1, with clover beginning to bloom, and the bees beginning to pay their respects to it nicely up to May 7, when the cold, frosty weather gave it all a clean "knock out."

W. E. BURNETT.

Harrisburg, Ill., June 3.

False Indigo—Cold Weather.

I send you a sample of flower which was brought to this country by the floods of 1883–84. No one seems to know what it is, and as the bees are working on it now very busily, I thought I would ask you to inform me through the Bee Journal what the flower is. It grows on a bush about 6 feet high, very much like a hazel bush, free from thorns. The leaves resemble black locust a great deal, but I hardly think it is a locust, as there are no thorns.

Bees in this county were doing finely until this cold spell, which has been very hard on them. P. F. KANZLER.

Rockport, Ind., May 22.

[Prof. Burrill, of the Illinois State University, to whom I forwarded the plant specimen, says this of it:—EDITOR.]

This is False-Indigo (*Amorpha fruticosa*), a shrub of not very uncommon occurrence in our western country. It belongs to the Leguminosæ family, hence is related to the locusts and red buds.—T. J. BURRILL.

Northern Illinois Convention.

The spring meeting of the Northern Illinois Bee-Keepers' Association was held at the apiary of H. W. Lee, in Pecatonica, Ill., May 21. There was a good attendance, and a pleasant day was spent in examining Mr. Lee's bees and fixtures, as he is one of the largest apiarists in this part of the State. The winter and spring losses are reported quite heavy by members of the association, and white clover not very plentiful this spring.

As the spring meeting is more of a visiting meeting, to see the methods others use, there were not many questions discussed. Resolutions of respect were passed upon the deaths of Edmund Whittlesey, of Pecatonica, and John Swanzey, of Freeport, who died April 24. B. KENNEDY, *Sec.*

New Milford, Ill.

Bees Wintered All Right.

I wintered 6 colonies all right, and now have 14. Some of my bees are in box-hives, and swarm as they please. I started in two years ago with one colony of Italian bees that I found on a mesquite bush. I knew nothing whatever about bees at that time, but hope to "get there" all right in time. J. W. KNAPP.

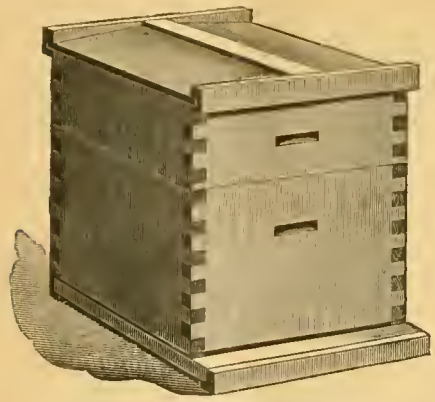
Water Valley, Tex., June 4.

Wintering Bees in Box-Hives, Etc.

I started with a colony of Italians in a hive with movable frames, and bought two old box-hives with fair colonies, from a neighbor who had let the bees "look out for themselves;" these I transferred into 8-frame Simplicity hives on May 7—each box-hive making four good frames of brood and honey, to which I added four full frames of foundation. On May 11 I examined them, removed the fastening strips, and found, to my surprise, that the foundation would average about half drawn out, and from two to four pounds of honey in each new frame. I had about eight pounds of honey from the old hives. The exceeding warm weather of the week, from May 6 to 11, had forced the pear and apple bloom two weeks ahead of its usual time.

I noticed that the combs in the box-hives were rounded at the bottoms, and were at least two inches from the bottom at their nearest point, with imperfect, unused cells four inches from that point. The inference I draw from this is that naturally the bees want an air-space below the brood; hence, would it not be a good plan to place a section-case under the hive for wintering?

I see so many complaints of bees dying during the winter in apiaries conducted with movable-frame hives, while my neigh-



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To Bee - Keepers and Dealers.

I have one of the largest Factories in the West, devoted entirely to the manufacture of Bee-Keepers' Supplies.

Having made arrangements with the inventor to manufacture the "Higginsville Hive-Cover," I will place it on all hives sent out this year, unless otherwise ordered.

Write at once for large illustrated Catalogue for 1895, giving full description and prices of Higgiusville Hive-Covers, Dovetailed Hives, Sections, Frames, Supers, Foundation, Crates, Boxes, Smokers, Extractors, etc.

Write for prices on large quantities.

E. L. Kincaid, Walker, Vernon Co., Mo.

Mention the American Bee Journal.

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If you care to know of its Fruits, Flowers, Climate or Resources, send for a Sample Copy of California's Favorite Paper—

The Pacific Rural Press

The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.40 per annum. Sample Copy Free.

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BEGINNERS.

Beginners should have a copy of the Amateur Bee-Keeper, a 70-page book by Prof. J. W. Rouse. Price 25 cents; if sent by mail, 28c. The little book and the Progressive Bee-Keeper (a live, progressive 28-page monthly journal) one year, 65c. Address any first-class dealer, or

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APIARIAN SUPPLIES VERY CHEAP —"Amateur Bee-Keeper"—how to manage bees, etc.—25 cts. The "Model Coop." for hen and her brood Wyandotte, Langshan and Leghorn Eggs for hatching. Cat. free, but state what you want

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BIG DROPS

of water has made the vegetation. Now the sun shines—the Honey wells up—the Bees gather it, and every Bee-Keeper should have all needed **Supplies at once.** Catalogue Free.

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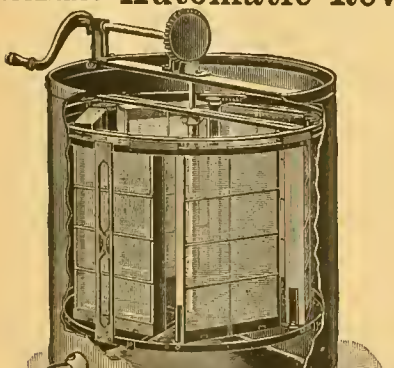
WILLIAMS' Automatic Reversible Honey-Extractor.



Perfect in Principle and Workings. Here is what the veteran bee-keeper, N. E. France, of Platteville, Wis., says of it: "I consider the Williams Automatic Reversible Extractor head and shoulders above any I have ever used; and furthermore, consider it the BEST on the market."

Italian Queens.

Bright Yellow or Leather-Colored Italian Queens at prices to suit the times.

Untested Queens reared present season — one, 70c.; two, $1.35; three, $2.00; six, $3.50; 12, $6.50
Tested Queen, reared '94..... $1.00
Select Tested Q'n " " 1.50
Extra Selected for breeding, The Very Best 2.00

Safe arrival and satisfaction guaranteed. Price-List Free. Address,

Van Allen & Williams, Barnum, Wis.

P. S.—We have a few Hybrid Queens in one of our bee-yards—to those that want them, 25 cts. for one, 5 for $1. Stamps taken for single Queen. Send Express Money Order payable at Barnum, or P. O. Money Order payable at Boscobel, Wis.; or Draft on Milwaukee or Chicago.

☞ Be sure to mention the American Bee Journal when you write. ☜

ONE-PIECE SECTIONS---CHEAP !

In Order to Reduce Our Stock, We Offer

No. 1 CREAM SECTIONS — 4¼x4¼x7-to-ft.; 1¾, 1⅞, 1 15-16 and 2 inch:
1000 for $1.50. 5000 at $1.40 per M.
10,000 at $1.35 per M.

No. 1 WHITE SECTIONS — 5¼x6¼x2, open on two 5¼ sides:
1000 for $2.50. 5000 at $2.35 per M.
10,000 at $2.25 per M.

G. B. LEWIS COMPANY, Watertown, Wis.

bor—who has only old box-hives, standing in a most exposed position (one colony in a nail-keg), the bees "looking out for themselves"—loses not one colony.

The article by C. Davenport, on page 309, has, I think, more value for amateur bee-keepers than the cost of three years' subscription to the American Bee Journal.

B. F. ONDERDONK.

Mountain View, N. J., May 18.

[It is an excellent plan to have a space of two inches or more under the frames in winter. A section-case will do well, but of couse there must be no sections in it, for they would be rendered unfit for use.

Perhaps the very reason colonies winter better in box-hives is because they are in such hives. The bee-space all around the frames is a nice thing for the convenience of the bee-keeper, but that very space is probably a bad thing for wintering.—ED.]

FOUNDATION—Choice Quality. Thin Brood, 40c.; Thin Surplus, 50 cts. 5 % reduction in 10-pound lots.
J. J. ANGUS, Plymouth, Wis.

Golden Italian Queens, 60 Cts.!

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COLONIES OF ITALIAN BEES in 10 Langstroth frame hives, $4.00 each. Tested or Untested Italian Queens at 75c each; 2 or more at 60c each. Address,
OTTO KLEINOW,
122 Military Ave., - DETROIT, MICH.

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Preparation of Honey for the Market, including the production and care of comb and extracted honey. A chapter from BEES AND HONEY. Price, 10 cents.

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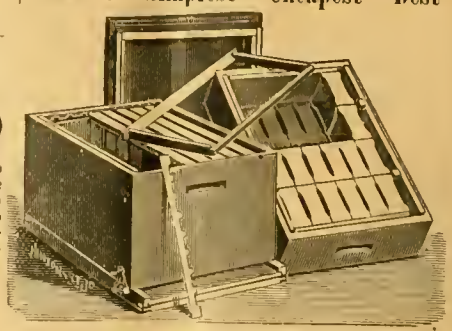

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35th Year. CHICAGO, ILL., JUNE 27, 1895. No. 26.

Contributed Articles.

On Important Apiarian Subjects.

Swarming Management for Comb-Honey Folks.

BY ADRIAN GETAZ.

This is for comb-honey producers. For those engaged in the extracted-honey business, I have nothing to say, except that the book, "Langstroth Revised," gives the best information I know on the subject.

The majority of our leading writers and practical bee-keepers allow their bees to swarm once; they hive the swarm on the old stand, and arrange to have as many of the bees as possible with the swarm, and depend upon the swarm for gathering the surplus they may get. If there is only a few weeks of honey-flow ahead, they contract the brood-nest as much as possible, so as to get honey instead of brood. Most of them agree, nevertheless, that colonies that do not swarm at all, give better results; and if they do allow swarming, it is because they cannot prevent it without disturbing the colony, causing the bees to get the swarming-fever, sulking and hanging outside of the hive, etc., instead of gathering nectar.

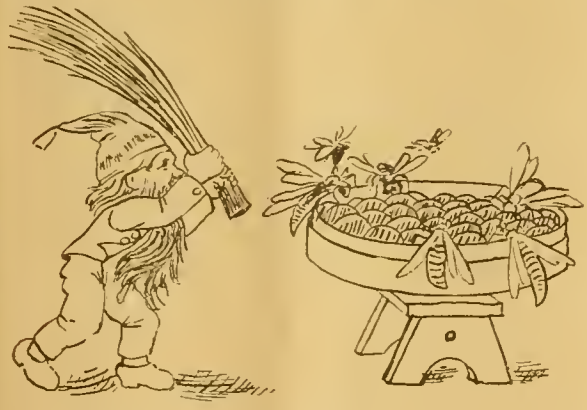
Where the honey-flow is long enough, both the colony and the swarm may have time enough to build up and gather more than the non-swarming colony. This is not the case with me. In this locality the non-swarming colony is decidedly ahead.

We come now to the prevention of swarming. There is, so far, only one way to do it, that is, removing the queens. Messrs. Elwood, Hetherington and Aikin have practiced it for years, and with hundreds and even thousands of colonies, and obtained splendid results. The process as given by Mr. Elwood is as follows:

At the beginning of the honey-flow, or rather at the time

Hans Schnitzel and the Giant Bees.

No. 1—"Py chimminy kracious, doze pig Chiant pees vill all mine podadoes ead oop alretty maype! I fix dem!"



No. 2—"Shoo, dere! you pig shtingers! I kills you all dead, so help me kracious!"

No. 3—"Ach, Himmel! I shpills mine kartoffel all de vloor ofer, und doze plamed olt pees now vants to shting me, doo, py cholly!"

No. 4—Ooh! I not can shmell goot some more! Anyhow, I knocks dere heads righd avay guick off—doze confoundt Chiant pees! I vants no more fighd mit dem, py Sockery!"

swarming is about to commence, the queens should be removed and placed each with a comb or two and some bees in a nucleus. All queen-cells should be destroyed then, and again eight or nine days later. In a week or ten days more the queens can be returned.

With them, the process has the advantage that it not only prevents swarming, but also increases the surplus crop, from the fact that no brood is reared during about 15 or 20 days, and all the honey that would have been consumed by that brood is saved. Besides, the bees reared at that time would be only consumers as, by the time they would come out of the cells, the honey-flow is over.

With me, the case is altogether different. To prevent swarming I would have to remove the queens between the 1st and 15th of May. Brood at that time, with me, produces bees that will be ready to work when my surest surplus (the sourwood) is to be gathered, and it seems to me that I cannot afford to lose 15 or 20 days of brood-rearing under such conditions. At any rate, the loss of brood ought to be reduced as much as possible.

Mr. Aikin (of Colorado), at a bee-keepers' convention, gave the following: His honey-flow begins about June 15, and lasts from 40 to 60 days. He removes the queens just before the honey-flow, cuts all the queen-cells but one, and in 8 or 10 days cuts again all the queen-cells that may have been started since; and allows the colony to requeen, unless he chooses to give them another queen. This is about the same as Mr. Elwood's process, except that the time without rearing brood is not quite as long. I should think that allowing the bees to rear a young queen would have the advantage of preventing any possible swarming later in the season. For those who wish to have a full description of the Elwood and Aikin methods, I refer to the American Bee Journal for 1893, Dec. 14, page 754 and 757; and Oct. 26, page 528.

Mr. Hutchinson, during the last few years, has removed all the queens early in the spring, and replaced them by young queens from the south. He has never told the public what success he meets with, any farther than what is published in his advertisement for selling his removed queens.

I have never tried the Langdon swarmer. I saw at once, when it was first given to the public, that it would have the disadvantage of reducing brood-rearing considerably, and I considered that too great an objection. At that time (about two years ago) I conceived the idea of turning the bees into the supers instead of turning them in another hive, and "invented" a contrivance to attain the result. Briefly told, the idea was to close the brood-nest except a bee-escape, and conduct the bees directly to the supers through a passage box. The supposition was, that the few young bees left in the brood-nest without anything brought from the field would destroy the queen-cells and give up swarming; and that the old bees, finding themselves out of their regular home, and without a queen, would also give up swarming and start to work in the supers in earnest. It also occurred to me that a comb of brood placed in the passage box would prevent the bees from being too much discouraged, or from scattering into the neighboring hives. Also that the escape from the brood-nest ought to be constructed in such a way that the outside bees could not realize that their old brood-nest is behind, or they would cluster on it, and possibly smother those left inside. For full description, see the American Bee Journal of Dec. 14, 1893, page 757. Now for the results:

Last May, between the 1st and 3rd, I closed the brood-nest of 6 hives having large brood-nests (13 Langstroth frames), and 19 hives having brood-nests of 8 frames a little larger than the Langstroth frames (about 9 Langstroth frames). The brood-nests remained closed from 3 to 6 days—rather too short a time for good results, but I was rather timid about it. In the first place, bees did not work in the sections as I hoped—they hung about the entrance, and in the passage box. I thought perhaps the comb in the passage box would be a splendid affair to rear fine queen-cells, but I was disappointed. For some unaccountable reason the queen-cells reared there were nothing but miserable little bits of things.

The escape works well. It is necessary to have a comb in the passage box. The brood-nest did not get depleted of bees as fast as I thought it would; but queen-cells, drones and drone-brood were all destroyed. Some of the young bees that were probably out for the first time, succeeded in going back through the escape. None of the worker-brood already started was lost, but no more, or very little more, was reared. On the other hand, I found plenty of eggs, showing that the queens must have kept on laying during at least two or three days after closing. One thing I secured, was the sure destruction of all cells that may have been already started, and by a much cheaper way than cutting them out myself.

Of the 6 hives with large brood-nests, only one so far (June 12) has swarmed, and as I found neither eggs nor young brood, I suppose the queen died. Of the 19 hives with small brood-nests, only three have swarmed, two of which were evidently crowded for space, the brood-nest being nearly full of brood. To be fair, I ought to compare with those not thus treated, but I cannot give definite results. Several colonies had already swarmed; those treated were the strongest among those that had not yet swarmed, some were divided, some queens were replaced, so I am not in shape to compare. I can only state the facts as they are.

One incident occurred last year in a trial of the "apparatus" that I must relate. I had placed it on a colony that was ready to swarm. The next day they swarmed from the brood-nest through the escape, and clustered upon a tree. The swarm was queenless, since the escape is arranged with a piece of perforated zinc at the base of the cone. That queenless swarm remained three days on that tree, and I don't know how much longer it would have been there if I had not hived it. The only way I can explain it is, that those of the bees that went back home found the things so changed (by closing the brood-nest) that they did not recognize the place, did not know where to go, and thus remained on the tree.

Knoxville, Tenn.

What Dr. Miller Thinks.

How to Prevent Swarming.—That's always an enticing title, but one gradually learns not to expect too much from it. On page 374, Friend Welch gives the general practice of all who work for comb honey, but this must be an exceptional case if it does much to prevent swarming. Will he please give us exact figures as to number of swarms from a certain number of colonies? Also size of hives he uses?

Time of Day to Extract.—I never thought of it before, but A. C. Sanford gives a good idea on page 374, to extract in the morning when the least thin honey is in the hive. Perhaps the Dadant plan is better, to leave all on until the close of the season, and then there will be no thin honey.

Pure Italians and Laying Workers—John McArthur is somewhat revolutionary on page 378. A pure Italian queen is generally understood, if I am not mistaken, to be one not only whose parentage is pure Italian, but whose fecundation has been by a pure Italian drone. He calls her pure without reference to her mating. Perhaps that might have been the better way, but it may be a question whether it is practical or desirable to change the meaning established by usage.

Again, if I understand him correctly, he wants to change the definition of pure Italians so that they must not only have three yellow bands, but must be yellow to the tip. That would put things in such shape that none of the queens imported from Italy are pure, as none of them produce workers yellow to the tip; and it would also make included among pure Italians those yellow bees descended from Syrian or Carniolan stock.

Mr. McArthur finds a use for that much-despised class of bees—laying workers; but I'm afraid he'll not find many to agree as to their usefulness.

Spring Desertion.—Oliver Doty will probably have in future years more experience like that he mentions on page 385, and very likely he'll never get a satisfactory explanation. Bees sometimes desert their hives in spring when nothing wrong can be seen, unless it be that there are too few bees present to take care of the brood. Strong colonies are not likely to desert their hives.

Marengo, Ill.

Trying Bee-Hives—Winter Losses of Bees.

BY B. TAYLOR.

In a recent letter from our jolly friend, Dr. C. C. Miller, he says:

"I have been so crowded that I have not previously acknowledged the receipt of yours of the 9th, for which I thank you. But what terrible thing have I ever done to you that you would inflict on me the trial of all the hives in the world? For you talk of bantering all to send their hives to me for trial. Bless your heart, I'm so crowded now that I have the hardest kind of work to keep things straight, and if such a

thing were put upon me as to have 25 to 40 different hives in use, I might soon reach the lunatic asylum."

Mr. Editor, if anything will save Friend Miller from the lunatic asylum, one of my handy wire-end frame hives will do it. I am not making them for sale, and have no motive in making the proposition I did to the Doctor; but to save him and others from losing their minds, I have been hoping for some time that the "Ideal" hive would appear and assert its superiority. But instead, the confusion seems increasing, so I propose to send one of my hives to the Doctor, and let him pronounce upon it theoretically, then hive a swarm into it, and after carefully testing in actual use, pronounce judgment. Let others who think they have the best hive in the world do the same, and then we will have some data to go upon as to the best hive.

It is not the size of my hive I propose to test (they can be made of any size), but the best method of constructing and suspending movable frames. In this matter we seem to be no nearer settlement than 20 years ago. In that time the bee-papers have been filled with articles on the question, and many new styles of frames have been invented. I have given nearly every style mentioned a fair trial, and now honestly believe my wire-end frame, as I use it, is entirely ahead of any other in use; and for the purpose of settling that question in the interest of the bee-keeping fraternity, I propose this test. "Let us have peace."

CAUSE OF LOSS IN WINTERING.

Another paragraph in the Doctor's letter reads thus:

"Sorry to hear of your bees coming out so badly, and am waiting to see in print what you think is the reason."

In both the winters and springs of 1894 and 1895, I have lost heavily in bees. Last spring I explained what I believed to be the cause of the losses in the previous winter, charging it to the fact of having mostly old bees in the colonies at the commencement of winter. The season of 1894 was a repetition of that of 1893 here. Drouth prevailed during the entire summer and fall, and bees did poorly, but few bee-keepers getting any surplus in both 1893 and 1894. I secured 100 pounds of surplus from good colonies; this was all white honey, and was collected from Alsike clover and basswood.

At the end of basswood (the last of July) all the surplus was removed. The hives at that time were heavy with honey in the brood-nest, but the drouth continued through the fall, the flowers dried up, and but little further honey was collected by the bees. The consequence was, that brood-rearing was mostly suspended, and by Sept. 15 many colonies had not a particle of brood. When the time came for putting the colonies into winter quarters, I found them fairly heavy with stores, but generally light in bees. I prepared them with great care, and put them into a first-class cellar where the temperature was under complete control, and kept them at about 42°. The bees remained very quiet during the entire winter. I swept the dead bees from the cemented floor often, and from the first there was many dead. This continued all winter, and by March 15 many colonies were entirely cleaned of bees, leaving hives with splendid clean combs, well filled with honey.

March 20 I began putting the live colonies on the summer stands, and continued it at intervals until April 8, when all were out. The weather was fine, honey began to come in freely very early, and I had great hope of escaping further loss, but each day I noticed hives from which bees had ceased to fly. Examination generally found a handful of young, downy bees with a queen and a little brood in all stages; but despite all warm covers and care, in a few days they were gone—there not being any *field-bees* to supply the family needs—and I now have 70 hives from which the bees so perished.

Now, friends, don't spend a bit of pity for me. I am not in the least discouraged. Never more confident in my life in bee-keeping! These 70 hives are filled with splendid brood-combs, and thousands of pounds of honey. I have now 60 colonies in splendid condition. Swarms have just begun to come (May 28), and none but a skillful apiarist can know how easily and rapidly my lost colonies can be restored.

The last two years have been the most instructive in my experience, in regard to winter losses and spring dwindling. Seeming mysterious results were continually happening in these lines. The pollen and many other theories have been advanced to account for them. For the pollen theory I never had respect enough to argue. To collect pollen is *Nature's voice*, and I think she knows more than the conceity bee-keeper who claims to have "doubled the profits of honey-production."

I have for some time been squinting in the direction of the age and condition of the bees themselves in our colonies when put into winter quarters, as the key to safe results, and I now know that no style of hive or perfection of quarters can keep alive a colony of old bees, five or six months, and rear young bees to take their place. If my bees had been fed a few ounces each day during the last of August and early September, they would have continued rearing brood, and my 70 empty hives would mostly now be filled with good colonies of live bees. I have proved that bees will not continue brood-rearing when the surplus is suddenly taken away, and honey ceases to come from the fields, even when the hives are well stored with honey. Hereafter, when there is no fall flow, feeding will be invoked as a substitute.

Now, Dr. Miller, there is my explanation of my heavy loss, "in print." Forestville, Minn.

Successful Wintering on Very Deep Frames.

BY THOS. THURLOW.

On page 67, is published an article that I wrote about how I put up part of my bees for winter, by standing the Langstroth frame on end as an experiment, to see if I could not have them strong enough in the spring to get locust bloom, of which there is a great deal about here. The experiment has been a decided success. First, they are strong, and locust is not yet in bloom; second, very few bees died in this very hard winter—so few, that the bees kept the bottom clean, and I never could find any to scrape out; thirdly, they must have been very comfortable all winter, for they consumed the least honey that I have ever known a colony to get through with, the proof of which is that when I examined them about the middle of March, they had brood in the upper end of three and four frames, and the next cells to the brood was capped honey. I judged that the queen was, or would be, crowded, and took out a frame of nearly solid honey, and put an empty comb in the center of each hive. "Rather early to spread brood, even if it is right to do it at all," old bee-men would say; but "circumstances alter cases." With a hive less than 10 inches square horizontally, and a good colony in the upper part of it, there is no danger from spreading brood.

On May 3 fruit-bloom began, and on the 7th I looked at them again—about four days too late—every cell that had not brood in was packed full of honey; two of them with capped drone-brood and queen-cells started. The next day they were taken out of winter quarters, and a full complement of frames given them in their natural position.

Now about the other 5 wintered with frames in their natural position: One "went up" in the February blizzard, with honey within an inch of the cluster. The other four consumed nearly all their stores, and in consequence had diarrhea badly; lost the best of their numbers through the winter, and had to be helped out with food taken from those wintered on the *right plan*.

This trial settles in my mind the great controversy going on about the depth of frames. I extract my honey, and the Langstroth frame is deep enough to extract from, and uncap handily. Anybody that has two sets of frames, a deep one for the brood-nest, and a shallow one for surplus, will wish they hadn't before they are done.

All my hives will have the frames on end next winter, with this change from this first trial: Instead of setting the top-bars all one way, they will be alternated, to try to keep the bees from going to the top and leaving honey below them. My expectation was, that they would keep below the honey the past winter, and only go up as they consumed it, but they didn't. They worked up along the bottom-bars where there was the least honey and the most room, and began to breed at the top.

Here let me fasten a truth: *Bees will* (in this Northern clime) *go to the top of the comb in winter, where it is the warmest, even if they have to go through capped honey to get there.*

This will answer the inquiries of several bee-keepers who, having read the article on page 67, wanted to know how the experiment turned out. Lancaster, Pa., May 14.

That New Song—"Queenie Jeanette"—which is being sung everywhere, we can send you for 40 cents, postpaid, or club it with the American Bee Journal for one year—both for only $1.10. Or, send us one new subscriber for a year (with $1.00), and we will mail you a copy of the song free.

BEES AND STRAWBERRIES.

A Short Symposium on the Question Whether Bees Work on Strawberry Blossoms.

The question whether bees work on strawberry bloom has lately received considerable attention in the American Bee Journal. The testimony seems to be almost unanimously in the negative. Now I think it is time this tune was varied somewhat. For a number of years I have been engaged in both the bee and fruit business, and there has been not less than a hundred acres of strawberry fields within bee-range of my apiary each year. I have given close attention to the honey-sources of this locality, and I am sure the strawberry is one of the important honey-plants. It blooms just at the time to bridge the gap between the general crop of fruit-bloom and the raspberry and alfalfa. The bees not only work on this bloom eagerly, but they get enough nectar to keep breeding up to a vigorous rate. Go into the strawberry fields at any time when the bees are flying during the blooming season, and the hum of busy wings sounds like a swarm might be on the wing. There must be something the matter with the bees or the berry plants, or both, in the East. Brethren, you had better come out here where the strawberry gives both nectar and fruit in abundance, and the bees know a good thing when they see it.

Bees are doing splendidly—just beginning on the alfalfa.

Canon City, Colo., June 10. L. J. TEMPLIN.

I have been much interested in the controversy among Messrs. Secor, Abbott, Miller, and others, in regard to bees working on strawberry blossoms. I am a bee-keeper on a small scale, and working for a horticulturist of 30 years' experience with this question—one who raises from 900 to 1,400 bushels a year, or from 7 to 12 acres. James Burr is his name. He says that bees do work on strawberries very strong some seasons: other years not at all. My bees, this spring, have just swarmed over the blossoms, and gathered both pollen and honey. They worked as strong as they would on apple-blossoms, even before fruit-blossoms, or more strictly speaking, apple-blossoms, fell. Two years ago they did the same. In some seasons they do not seem to notice them much.

Mr. Secor is right in regard to the staminate plants bearing fruit. FRANK P. STOWE.

Monroe, Conn.

I have read Mr. Secor's article about bees and strawberries. He may be right; I don't dispute him at all, as he is in Iowa and I in Utah, but my bees claim a right to my strawberry patch, and when I went to see them they drove me out.

The prospect for honey this year is looking fair, and I hope it will turn out as it looks, as for several years the crop has been poor. The white clover is blossoming nicely, and the lucerne is beginning to bloom.

I have noticed that some writers have written considerable about sweet clover as hay, and also as a honey-plant. Bees seem to like it better than live stock in this country. Lucerne is the dryland hay. It is finer than sweet clover, and is a perennial. Sweet clover is strictly a biennial; if you cut it for hay you will be obliged to cut it before it blooms, or it will be too hard and woody, hence it would do your bees no good, and be gone in two years. Lucerne doesn't treat you in that way. You can cut it as often as you want to, and the root is still there. WM. C. ASHBY.

Wood's Cross, Utah, June 1.

I have read with interest the discussion, not to say controversy, going on in the American Bee Journal, between Messrs. Emerson T. Abbott and Eugene Secor, in regard to bees working on strawberry bloom. Mr. Abbott takes the ground that bees *do* work on strawberries; while Mr. Secor maintains that they do *not*, and brings in considerable evidence (that is, negative evidence) to prove his position.

Now both these gentlemen are too well known for anybody to suppose that they are discussing the question for any other purpose than to get at the real facts in the case. If I am not mistaken, Mr. Abbott has brought no positive evidence to prove that bees do work on strawberries, nor has Mr. Secor brought any positive evidence that they do not. True, Mr. Secor has the statements of several gentlemen who raise strawberries, and keep bees also, that they have never seen the bees working on the strawberries. Mr. Secor, I believe, is a lawyer, and knows the difference between positive and negative evidence. If he were defending a man charged with crime, he certainly would not expect to clear him by bringing even a dozen men to swear that they did not see him do it, when one man had sworn that he did see him do it.

Well, now, I was much surprised to hear anybody say they had never seen bees working on strawberries. I have raised strawberries several years, and also kept bees ten or more years, and I have seen the bees on the strawberry bloom more or less every year. Some years they work on them but little—presumably because there is something else better; but this year, in particular, the strawberries were one mass of bloom, and they were alive with bees. My strawberries are the Warfield, fertilized with Michael's Early, and I noticed that they visited the flowers of both varieties, which leads me to think they both sought and found honey as well as pollen.

I have had no opportunity for seeing them on blackberries, but they work on raspberries—all varieties—the red raspberry producing a most delightful honey; also on gooseberries and currants. S. H. HERRICK.

Rockford, Ill.

My experience with bees working on strawberries tallies with that of Hon. Eugene Secor. As he calls for facts instead of theory, I will give a fact which came under my observation.

About six years ago I came to this city (Franklin, Pa.), at that time as foreman in the large market gardens and greenhouses of C. A. Rollo. It was shortly after the holidays when I entered his employ, and during a conversation with my employer a short time after this I told him he ought to keep a few colonies of bees for the benefit of his strawberries. I explained to him the great value of the bee to the blossoms, and the utter inability of fruit to set without their aid, laying particular stress on strawberries, and that, too, with the utmost confidence that I was right. I saw I was making an impression, and kept the good work up by telling him I was able to handle bees. The outcome of it was that he took me with him one fine spring day to an apiary to select some good colonies of bees. We got five, and set them by the fence at one end of the strawberry patch.

I never saw strawberries bloom more profusely, and although I was over the field every hour of the day, and my employer was simply attention itself, I don't believe we saw two dozen bees at work on the blossoms all the time they were in bloom. When my employer called on me for an explanation I told him that I thought the atmospheric conditions were not right for secreting nectar to entice the bees to the blossoms, and that his strawberries would doubtless be a failure; but a greater yield of strawberries has never been my good fortune to see—large, fine, and delicious! In the face of such evidence, I had to let my pet theory go, and the overthrowal cost me no little, either. It was humiliating to have asserted facts prove groundless. While I never wished anybody hard luck, I believe it would have been some sort of a satisfaction to me, at the time, to have seen those strawberries prove a failure.

I think that Mr. Secor, and some others who have taken exception to Emerson T. Abbott's statement about rows of staminate plants, have failed to take Mr. Abbott as he meant. It is a fact that all varieties of strawberries produce both staminate and pistilate plants, but never are both kinds of blossoms on the same plant; each plant must either be stamen or pistil; and the runner from the staminate plant will grow only stamen, and from the pistilate plant only pistil. And as the plants are generally selected and set out promiscuously, there are usually enough staminate plants scattered promiscuously over the patch, but it is an easy matter when cutting the runners to keep this kind by themselves, and plant them in rows by themselves, if so desired.

Mr. Secor seems to question that there is any scarcity of strawberries that produce only one kind of plants. How about the Crescent, which produces only pistilate, and cannot be grown true to seed, but only from runners? Can it be kept up? and it is only a matter of a short time when it will have become so devitalized that it cannot be profitably grown. Instead of the Crescent being a "freak," as many suppose, it is the result of the promulgator, cutting runners from the pistilate plants, and none from the staminate.

I am here going to question the use of staminate plants for the production of strawberries. We know that bees seldom heed them at all, and other insects are very scarce at this time of the year, and any one who has carefully examined a strawberry blossom, and the nature of the pollen, must have come to the conclusion that it was never made for a wind-fertilizer. I don't believe that more than one strawberry in a hundred is ever fertilized at all. If you wish to ascertain the extent of fertilization in strawberries, just select a number of nice, large, dead-ripe berries, plant them, and see how many will grow from the seed. You will find that 99 out of 100 will rot in the ground.

Now to prove that these were not fertilized, just take a

camel's-hair brush and carry pollen from staminate plant to the pistilate, and plant the fruit from these plants, and you will find they will grow, and if fertilized from the stamen of the same variety as the pistil, they will bring forth plants that will grow fruit true to seed. But if from stamen different from the pistil, the seed will bring forth a plant that bears fruit that is a blending of the two varieties, or seedling, different from either. A hen will lay eggs without being mated, but they will be sterile, and incapable of reproduction. A strawberry plant will bear fruit without being fertilized, but it also is sterile, and cannot reprodnce itself.

Franklin, Pa. ED. JOLLEY.

Canadian Beedom.

Nom-de-plumes.

Rev. Emerson T. Abbott is very much exercised that some writers for the American Bee Journal, Bee-Master among the rest, do not write over their own proper names. He says he pays very little attention to criticism when he does not know who is the author of it; also that contributions would be of much more value if backed up by a personality with a real name; and farther, that he feels no interest, or very little, in articles "fathered by a—nobody."

There is no valid objection to anonymous writing unless the object is to hide the author of an attack on character, who is too cowardly to come out man-fashion with what he has to say of another. This is supposed to be a free country, but it isn't that exactly. Instead of being permitted to do as you like, and go as you please, people assume to instruct you and dictate to you. Some like to sit on their door-steps in the open street to be seen by all passers-by, while others prefer the seclusion of a shady bower or a summer-house. If one writer thinks the sledge-hammer of his name is needed to drive home what he has to say, and another prefers to have his articles appreciated according to their intrinsic merit, is there any good reason why both should not be accomodated?

It may be prudent in some cases for names to be withheld. It was so in the case of Junius. If his identity had been known, he would have had his head taken off.

Mr. Abbott may think less of an article when he does not know the author's name. Others may think all the more of it. Truth does not need the backing of a name or names. One of the evils of this age is that people ask not "What is said?" but "Who says it?" Further, as it takes all sorts of people to make a world, so it takes all kinds of contributions to make a journal, especially a bee-journal. We have disciples of Mr. Doolittle, admirers of Mr. Heddon, worshippers of Mr. A. I. Root, and devotees to the views of Dr. Miller. We have others who know a good thing when they see it attached to other names, or without any name.

Finally, a nom-de-plume appeals to the curiosity of many. This is a mighty principle in human nature. It is considered a special feature of woman's character, but some men have it just as strongly developed as the fair sex. I think Mr. Abbott has a liberal share of it, or he would not be so anxious to have names disclosed. I commend to him the grace of repression. It is good self-discipline. While he is cultivating it, he might chew the cud of the query, Why is it that the best journals in the world are impersonally edited? That's a fact, and there must be a way of accounting for it.

Popularizing Bee-Knowledge.

Attention has already been called in most of the bee-papers to Mr. Hutchinson's articles in the Cosmopolitan for May and June, but it has been in a very brief way. They are certainly deserving of much fuller mention, and, for one, I would like to see them copied into the American Bee Journal. Presenting, as they do, some phases of bee-keeping not to be found in the hand-books or apicultural periodicals, they are admirably fitted to dispel some of that popular ignorance on the subject which is so dense and wide-spread, that even the literary man who put the sub-headings to Mr. Hutchinson's first article, knew no better than to say, "Being a complete account of the honey-bee, his home, his migrations, his habits of life, his business methods, his storehouses, his food and communal life." Probably not one person in a thousand is aware that worker-bees, which constitute the chief population of a hive, are undeveloped females, or that the masculine insect is only a transient performer on the scene, appearing when the busy season is inaugurated, and vanishing when increase of population is not farther desirable until the advent of another year.

I think bee-keepers as a class are inclined to be selfish monopolists. They are not anxious to let the general public into their secrets, lest they should become charmed with what Mr. Hutchinson calls "the pleasant occupation of tending bees." This idea is indeed openly advocated by some who would have the pursuit confined to specialists. There is a class of bee-keepers who look at the business only from a dollar-and-cent stand-point. They have no sympathy whatever with the poetry of bee-keeping, and cannot appreciate in the slightest degree such writing on the subject as the charming paragraph with which Mr. Hutchinson opens his first article in the Cosmopolitan. I am pretty well read in bee-literature, I think, but I do not know another passage in the works of any apicultural writer to match the one just referred to. Nor do I know any literary man capable of writing such a poetic eulogy on the bee and bee-keeping except Maurice Thompson, who, unfortunately, is as ignorant of the pursuit as the *literateur* who wrote the introductory heading to Mr. Hutchinson's first article in the Cosmopolitan.

In England there are many who pursue bee-keeping as a fascinating recreation or scientific pastime. They make no account of the value of the honey, or the question of profit and loss in connection with the business. They find endless pleasure in observing the ways of bees. There is soothing music in their hum, and constant interest in the study of what is going on inside the hive. What there is in this to be deprecated or frowned upon, I have never been able to see, nor can I understand why studying the habits of bees is not, at least, quite as rational a diversion as observing a game of base-ball, and shouting one's self hoarse over the changing tide of victory and defeat as it ebbs and flows during such a game. I am one of those who hope yet to see a class of amateur bee-keepers on the American continent, who will keep bees for the love of the thing, and not merely for the money they make out of it. When we get a pretty strong infusion of this class into the ranks of bee-keepers, the pursuit will be uplifted to a higher plane, a better apicultural literature will be demanded, there will be less of "Tom, Dick and Harry," "A. I." and "Hutch," in the style of writing adopted, and perhaps even the Century will condescend to have some articles like those in the Cosmopolitan, illustrated in the highest style of art, and free from the amusing error as to the he-bees.

We owe it to bee-keeping to follow in the track blazed out by Mr. Hutchinson so far, at any rate, as to popularize bee-knowledge to such an extent as to scatter some of the most flagrant errors that prevail in regard to bees and honey. The idea largely prevails among the general public that bees resemble the devil in their prowling nature, and that as he goes about seeking whom he may devour, the bee goes about seeking whom she may sting; whereas, there is no creature in nature more disposed to mind her own business and give others a good letting alone than the bee. There is also an almost universal tendency to strike at a bee when it is seen near by, and this ignorant, foolish act is the cause of most of the stings people get. Whether they take to "the pleasant occupation of tending bees" or not, the general public ought to be taught how to behave in the vicinage of bees, and such general lessons in regard to the nature and uses of honey as will enable them duly and discriminatingly to appreciate one of the most valuable products with which Nature has enriched us.

Ten Weeks for Ten Cents.—This is a "trial trip" offer to those who are not now subscribers to the American Bee Journal. Undoubtedly there are thousands who would take this journal regularly if they only had a "good taste" of it, so as to know what a help it would be to them in their work with bees. In order that such bee-keepers may be able to get that "taste," the very low offer of "10 weeks for 10 cents" is made.

Now, dear reader, you cannot do a better service than to show this offer to your neighbor bee-keeping friends, and urge them to send on their 10 cents and get the next 10 numbers of the old American Bee Journal. In fact, *you* could afford to send the 10 cents for them, and then after the 10 weeks expire, get them as new subscribers for a year. They will be easy to secure then, for the 10 numbers will be a fair trial, and they will want the Bee Journal regularly if they are at all interested in bee-keeping.

Remember, it's *only 10 cents for 10 weeks*, to all not now subscribers to the Bee Journal. This offer expires July 15

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Taking Honey from the Brood-Chamber.

If a "fellow" don't know, and won't ask, he will not find out much about bees.

What I want to know is this: Should I take any honey from the bottom part of the hives? I use the dovetailed hives. I have no extractor, but expect to have one another year. I have taken a good supply from the upper story. The bees are strong and doing well. How would it do to take the two outside frames fram each hive and replace with starters? Please inform me when and how to proceed.

I have had two swarms so far this season. I transferred one colony from an old box-hive to the dovetailed hive, which I don't think will swarm. R. F. C.

Leavenworth, Ind., June 11.

ANSWER.—Yes, you can find out a good deal by trying experiments with bees, but it's often a very expensive way, and I'd a good deal rather you'd ask—if you don't ask anything too hard.

I don't believe I'd take any honey out of the brood-chamber. Don't begrudge the bees their share, and I suspect they have it in just the best shape to suit their winter needs. You may think they're going to gather more, and can just as well spare some that's in the brood-chamber. Well, if they need any more room, give the room above, all they need, and as often as they need it. I'm glad you haven't any extractor this year, for if you had I'm afraid you'd empty every drop of honey out of the brood-nest, and perhaps empty out a good share of the brood.

Bees Smothered in Moving.

I bought a colony of bees from a neighbor, which swarmed yesterday. This morning I went and hived them—a powerful bunch of them—and brought them home, and set them on a stand in my bee-yard, and went to the house for a hatchet to let them out with, but did not go back for an hour. When I opened them, to my surprise I found them drowned with honey, and nearly all dead. This is the third hive I have brought home in the same way, and the other two are doing nicely. What was the cause of this great calamity? And how shall I get bees moved, and not stand the chance of losing them in this way? There was no honey in the hive. E. O. S.

Rosebud, Tex.

ANSWER.—I know just exactly how to sympathize with you, for I once lost a remarkably strong colony in the same way. The bees smothered for want of air. You say the bees drowned in honey, and afterward you say there was no honey in the hive. Perhaps some may not understand this. There was no honey in the hive in combs, but the bees had a good store of honey in their honey-sacs, and when they began to smother they "threw it up," and so appeared drowned in it.

Knowing that the trouble was smothering for want of air, the remedy is plain. Don't shut them up so tight that they cannot get plenty of air, and if the whole top is covered with wire-cloth, it will do no harm. It will help matters to throw cold water on them.

Plans for Getting Increase of Colonies.

I have three colonies of bees in 10-frame dovetailed hives. One is an old colony transferred with its combs and brood from a box-hive about two weeks ago; the other two are this year's swarms, hived respectively May 18th and June 1st. The old colony has not swarmed this season on account of its being transferred.

From these three colonies I wish to increase to five, putting the increase also in the 10-frame dovetail. All are in pretty fair condition; the swarm that was hived May 18 has done good work on nine of its frames. Several of its combs are capped over for a few inches below the top-bar. The old colony seems to have a good amount of brood, but not so much honey.

I have thought of the following plan: Take the queen and a frame of brood with the bees adhering, from the old colony that was transferred, and put them in a new hive, replacing the frame thus taken with a frame of foundation. Then take a frame of brood and bees from the best of my other two hives, and, say a frames of honey and about three frames of foundation. Then set the new hive in place of the old one, removing the old one to some distance (that is, the one from which the queen was taken), and so catch any bees returning from work. I do not altogether like this scheme. You will notice there are brood and bees from different hives in the new hive:

1. Will these bees stay together peacefully? or will they return to their own hives?

2. Had I better brush the bees from the frame of brood that comes from the hive of the strange queen?

3. Will the bees in the old hive from which the queen was taken return in too great numbers to the new hive which has been placed on their old location? and which contains their old queen? The hives are all exactly alike.

4. If the plan works well in other respects, how about the old colony which is deprived of a queen until they can rear one from their brood? and it would be a long while before they could get new bees from their new queen, though of course the old brood would be hatching for 21 days.

Suppose this plan worked all right for *one* swarm, but I want to get *two*.

Please criticise this plan, and I would be very much obliged if you would detail a better. H. P. J.

Ben Avon, Pa.

ANSWERS.—1. The nurse-bees, or those under 16 days old, will probably all stay, but most of the field-bees will return within a day or two to their old home.

2. Perhaps you better not brush off the bees, as the young bees that you would brush off are just what are needed.

3. The only danger could be that so many bees would desert the old hive that the brood would be chilled. I think you will hardly find they will leave to such an extent as that.

4. It would leave the old colony in such bad condition that the whole scheme is thereby rendered objectionable. To make your three colonies increase to five, it would be necessary to make another colony queenless for a long time, and to have two queenless for so long is objectionable.

Here's a plan that would perhaps suit you better: Suppose your colonies are numbered 1, 2 and 3. Take from No. 1 a frame of brood with adhering bees and its queen, putting them in an empty hive No. 2, filling up the hive with empty combs or foundation. Set No. 4 in place of No. 2, setting No. 2 in a new place. No. 4 will receive all the flying force of No. 2, and in a day or two will be fairly strong. No. 2 having its full supply of brood and plenty of young bees to care for the brood, will soon be strong again. No. 1 being left queenless will start queen-cells. In 8 or 10 days take half or more of the brood with adhering bees from No. 1, put them in a new hive, No. 5, and set No. 5 in a new place. These bees being without a queen will stay wherever they are put much better than bees having a queen. Be sure that a good sealed queen-cell is taken for No. 5, and also that one or more is left in No. 1. In 10 days or so after the young queens hatch, they ought to commence laying. Nos. 1 and 5 may be helped by frames of brood that No. 3 can spare.

Swarming and Transferring.

1. This is my first experience with bees. I purchased one colony of blacks, but since taking the Bee Journal I think I made a mistake in not getting Italians instead. I have had my first experience in swarming. One came out June 5, and I hived them in a box, as my hives were delayed. They went back to the old hive, and on the 6th they came out again and went back as before. They did not come out again until the 8th, then I hived them, and they staid. The 9th there was another swarm from the old hive. Now I supposed it was eight days after the first swarm came out before the next one issues. Do they often come out in four or five days, as this one did? Both are good-sized swarms.

2. Would you advise me to purchase Italian queens for each one of these swarms?

3. I have both of my new swarms in boxes, as my hives were delayed. How shall I proceed to transfer them?

W. Concord, Minn., June 10. F. J. C.

ANSWERS.—1. A second swarm may be expected to issue about as soon as the young queen is mature enough to go with the swarm. This usually occurs about eight days after the prime swarm issues, but the time is by no means exact. It may be less, and it may be more. It is possible that in your

case the bees observed the orthodox eight days. For I suspect that the swarm you hived on the 8th had a young queen and not an old one. The old queen was likely defective in some way, and could not go with the swarm. The queen-cells were sealed perhaps about May 31, and that was the regular time for the issue of the prime swarm. Either the swarm did not issue at that time, owing to the inability of the queen, or may have issued unobserved and returned. Then June 8, the old queen having been put out of the way, the swarm issued with a young queen.

2. You can do so; or if you don't care to pay so much, you can get one queen now and rear queens from her.

3. You will find instructions for transferring in any of the text-books, for which there is hardly room in this department. But I doubt the wisdom of being in too much of a hurry about transferring. Your bees have now a start in box-hives, and you might perhaps do well to leave them there till swarming next year, then put your swarms in frame hives. If the old hive is a box-hive, you may do well to transfer it about June 21, as by that time there will be very little brood in the way. On the other hand, there may be a good deal of honey in the way.

Rent for an Apiary—Other Questions.

1. What rent should I have for my apiary? I run it for extracted honey, have the Langstroth-Simplicity hive, frames wired, and combs built. I have a large sized extractor, and everything complete.

2. I expect to add a second super and frames filled with foundation. What do you think about a narrow super, say 6 inches to start the bees off in the spring? I want swarms returned to the mother colony, except a few very early ones.

Miramar, Calif., June 1. AMATEUR.

ANSWERS.—1. That's a very hard question to answer. I don't know that there's any precedent for it, and the rent might be really worth ten times as much one year as another. In a year with a big honey crop a man might be able to afford $100 rent for an apiary of a certain size, while in a year of dead failure it would be a losing business for him if he paid a rent of 100 cents. So you see it's just as you can agree upon it. Possibly it might be a good way for you to have so many cents a pound for all honey harvested, or to have so many pounds of honey out of every hundred.

2. I don't believe bees would commence work any sooner in a super only 6 inches wide than they would in one large enough to cover the whole top of the hive. Possibly you mean the depth rather than the width of the hive, and 6 inches deep would perhaps be better than something deeper.

Returning swarms will be all right if you keep it up, but remember that it may be necessary to return a number of times before all swarming will be given up.

Several Eggs in a Cell—Swarming—Folding Sections.

1. On May 21, I introduced a young queen from the South, and on looking over the brood-frames June 7 I saw a cell with six eggs in it. Is it a common thing for queens to lay more than one egg in a cell?

2. On May 24 I had a prime swarm from one of my colonies; on June 2 another swarm, and on June 3 another—all from the same hive. The last two were hived together. Was it likely that there was a queen with the last swarm, which swarmed one day after the second swarm came out?

3. How can I fold one-piece sections by hand without having them break at the corners when dry? S. A. R.

ANSWERS.—1. No, it is not a common thing to find as many as six eggs in a cell when a laying queen is present. A good queen will not be likely to lay more than one egg in a cell unless badly crowded for room, or in case too few bees are present to cover much brood. Laying workers often lay a number of eggs in a cell, and in that case they usually use drone-cells or queen-cells.

2. You may be about certain there was a queen with that third swarm, and there would be nothing strange in the case if several queens were with the swarm.

3. If they're very dry I don't know of any way by hand or otherwise that you can fold them without breaking, but you are not obliged to keep them dry. You can wet the parts that are to be bent so they will work as well as new. The sections are packed in a package so that the V-grooves all correspond. The whole package of 500 sections can all be treated together, and made ready in five minutes. Take a teakettle not more than one-third full of boiling water, pour as fine a stream as you can and have a steady stream. Let it go into the grooved places, following regularly along. Of course the sections must lie so that the water will run down through the whole pile. I've never had any trouble with sections so treated. Some say they will be all right if kept in a damp cellar for a few days. I've never had any success in that way, but I have no very damp cellar.

Wants His Bees to Swarm.

Bees are not doing well at this date (June 3). It is very wet here. I have been using box-hives for 20 years. I have now bought a lot of frame hives, and I wish to get the bees into them this season. They are lying out very much in the old hives, and don't swarm. Would it be advisable to "drive," or wait for natural swarming? N. P. W.

Banister, Wis.

ANSWER.—If bees are doing so little that they don't care to swarm, it may not be the best time to do any driving. I'll tell you what you can do to make swarms come faster when only part of them are willing to swarm. Suppose No. 1 is the first one to swarm. Hive its swarm on the old stand, and put No. 1 in place of another colony, perhaps No. 2, putting No. 2 on a new stand. Of course No. 2 was a strong colony, and a heavy part of its force will join No. 1. In a week or ten days more No. 1 will swarm again, the swarm being put on the stand No. 1 now occupies; No. 1 being this time put in place of No. 3, the latter being put in a new place. A day or so later No. 1 may swarm again, and as often as it does it must be put in the place of a colony that has not swarmed. Each colony that swarms may be treated in the same way as No. 1, and you probably will have swarms enough.

Fears Foul Brood from Chilled Brood.

Whilst examining one of my colonies of bees yesterday (after a rainy spell of about two weeks), I found that not only were the bees on the verge of starvation, but a very large percentage of brood, in all stages, had actually become chilled beyond recovery. I immediately fed the bees some honey, removed the dead bees, which had accumulated on the bottom-board, removed the empty combs, and inserted a division-board so as to make everything snug and clean.

Now I know that this colony will not do me very much good in the way of surplus honey, but I wish to see how good a colony I can make of it by fall for the sake of experiment—if for nothing else. But I am in doubt as to one thing. Is there any danger of this chilled brood finally causing "foul brood?" or will the bees remove it all themselves, now that the weather is favorable and honey coming in? I am dreadfully afraid of "foul brood," and wish to stamp it out before it actually exists.

Please excuse lead-pencil, for I see that you do not find carelessly written questions easier to answer than those penned with care; but perhaps you'll overlook it for once.

Maher, Colo. F. A. D.

ANSWER.—I think it's a good thing to feel "dreadfully afraid of foul brood," and I wouldn't like to say anything to make you less vigilant, so I will say that there are those who think that foul brood may originate with dead brood. I am bound, however, to add that I have never known anything of the kind in my own experience of 34 years, and during that time I have often had dead brood in hives and out of them. So if your bees do as mine have done, they'll clean out that dead brood all right. If the colony is weak, however, it may be somewhat discouraging for them to have too much house-cleaning to do, and you might give some of the combs to stronger colonies.

Don't worry about the lead-pencil. If all writing were as neat and plain as yours, I shouldn't care if it was written with the end of a burnt stick.

Honey as Food and Medicine.—A new and revised edition of this 32-page pamphlet is now issued. It has 5 blank pages on which to write or paste recipes taken from other sources. It is just what its name indicates, and should be liberally distributed among the people everywhere to create a demand for honey. It contains a number of recipes on the use of honey as food and as medicine, besides much other interesting and valuable information. Prices, postpaid, are: Single copy, 5 cts.; 10 copies 35 cts.; 50 for $1.50; 100 for $2.50. Better give them a trial. Send all orders to the Bee Journal office.

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George W. York, - - Editor.

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Editorial Budget.

Prof. A. J. Cook, I notice by the June number of the Rural Californian, is now the editor of "Insects and the Apiary"—a department in that excellent monthly farm journal. It is a splendid selection, and should help to make the "Californian" stronger than ever.

The Illustrated Home Journal, published by Mr. Thomas G. Newman, is to be consolidated, July 1, with the Philosophical Journal—a 16-page weekly periodical now owned and published by Mr. Newman. The monthly Home Journal was in its 10th year. No doubt the majority of its readers will be pleased to receive a weekly hereafter.

The Only Excuse that is offered for the appearance of "Hans Schnitzel and the Giant Bees," on the first page of the Bee Journal, is that

> A little nonsense now and then,
> Is relished by 'most all bee-men—

and quite likely the bee-women, too. No extra charge, at any rate.

Mr. S. I. Redfield, editor and proprietor of The Roswell Register, Roswell, New Mex., made the Bee Journal office a pleasant call last week. He kindly left samples of comb and extracted honey on my desk, from the apiary of Mr. R. Burt Slease, of Roswell. That region is destined to become a great honey and fruit country in the near future. It is being developed rapidly, and settlers are moving in. Mr. Redfield reports it a fine climate for consumptives, having gone there himself to regain his health. His rugged appearance is a good advertisement for the climate in his location.

Those Who Send Questions to be answered by Dr. Miller in the department of "Questions and Answers," must not expect replies by return mail, nor in every case can they be answered in the Bee Journal within a week. Each questioner must also remember that there are others besides himself who ask questions, and it is often quite impossible to get all of them answered in one number of the Bee Journal. So if your question is not answered as promptly as you think it should be, you will now know the reason for the delay. It is desired that all who wish should feel free to patronize the department of "Questions and Answers," and then remember that the publishers will print the answers as promptly as possible.

A Two Days' Visit at Dr. Miller's was greatly enjoyed by Mrs. York and myself week before last—Thursday and Friday, June 13 and 14. A part of each day was spent in the Doctor's home apiary. He has two out-apiaries also—about 140 colonies in the three yards. Owing to the severe drouth the bees had not done much, but a glorious rain June 11 so changed the face of nature, and inspired the bees to such an extent that on June 14 they worked very thick on the white clover, which was blooming profusely.

The afternoon of June 13, we took a delightful 12-mile carriage ride over the rich farming country surrounding the beautiful city of Marengo. The farmers were busy cultivating the extensive fields of corn which looked well. We returned to Chicago Friday afternoon, arriving here at 5:50 o'clock. The next day there was just three days' work to be done, in order that the following week's Bee Journal should not be late. If I were sure Dr. Miller and his good wife, and Miss Wilson, wouldn't hear it, I'd say that Mrs. York and I didn't want to come back to Chicago at all. But as we hadn't arranged to spend the summer there, of course we had to return. But we had a good time—and just as "sweet" as it was "short."

Against Honey-Adulteration.—On page 349, I reported that a law had been passed by the California legislature making it a crime to adulterate honey in that State. As there seemed to be a little uncertainty about the matter, I called for further information, which has come to hand in the following clipping from the Ontario, Calif., Record, kindly sent by Mr. W. A. Pryal, of North Temescal, Calif.:

There has scarcely ever been a more propitious outlook for the bee-business in Southern California. All over the valley, mesa and mountain, great canes of sage are bursting into bloom, some of which have reached the remarkable height of 15 feet, and are as large and verdant as asparagus shoots. Besides, the bee-men are to be protected from the bogus honey-makers, as the dairymen are from the manufacturers of oleomargarine. The bill has been duly approved by the Governor, making it a severe penalty to sell anything for honey that is not the pure, unadulterated product of the hive. Altogether the prospects for prosperity in this great industry are good, and the outlook will, in a measure, neutralize the disaster of last season.

Now let us hope that needed law will be rigidly enforced, so that the producers of the genuine article may have the protection they are entitled to.

The "Trial Trip" Offer of the Bee Journal to those not subscribers—10 weeks for 10 cents—will be withdrawn July 15. This is positive. It is hoped that all who have taken advantage of our liberal "short term" offer will so appreciate the Bee Journal as to subscribe for a year at the expiration of their 10 weeks. Remember, the time for sending in names on the 10-weeks-for-10-cents offer, expires July 15. I trust those who subscribe for a "trial trip" for their friends, will be able to secure them as regular subscribers, and thus earn some of the premiums offered in the Bee Journal for such work.

Hon. J. M. Hambaugh—a favorite apiarian son of Illinois—it is reported, will remove to Southern California this month. I hope it isn't true, for the cause of Illinois apiculture cannot spare him. We need more like him. But if he persists in going to the "Sundown Land," a host of good wishes will go with him, and no doubt a royal welcome awaits him "beyond the Rockies."

Dr. Miller will do "Gleaner's" work hereafter for the department "Among the Bee-Papers." It is understood that there is to be nary a "straw" about it, but all the best grain that can be gleaned in our neighbors' fields.

Among the Bee-Papers

Gleaned by Dr. Miller.

BEES IN SNOW.

I tried an experiment with seven colonies of bees. On January 30 I went to my Zorra apiary. The snow was deep; I dug a hole about 2x1 foot at the entrance of these the entire depth of the snow, put a board on top of the snow, thus enclosing the hole. Of these, one queenless was dead, the other six wintered well. Three of them in winter-cases were so strong they were hanging out the other day when ice froze three-eighths of an inch thick.—J. B. Hall, in Canadian Bee Journal.

FOUL-BROOD LAW IN WISCONSIN.

N. E. France has been making a strong effort to have some legislation in Wisconsin that would do something toward protecting bee-keepers against foul-brood. In conjunction with others he framed a bill much like the Canada foul-brood law. This was referred by the legislature to the Committee on Agriculture. Mr. France says in Gleanings:

"Said Committee reported the bill was worthy of consideration; but as it provided for an appropriation to defray expenses of a State Inspector, they would recommend the bill for indefinite postponement. As soon as this report reached me, I learned by several assemblymen, that, if the bee-keepers would write them, urging the passage of the bill, it would have quite an effect. I wrote 65 postal-card requests to beemen, asking them to plead for their interests. Had they all responded with the earnestness of F. Wilcox, H. Lathrop, and F. Murray, Wisconsin would have had a foul-brood law.

"I set a date for them to reply. The same date I again appeared before another State claim committee, with only a small handful of letters for support. As a last resort I presented this committee a bill the same as before, except that no State money was asked, but a two-cent-per-colony tax on all colonies of bees, to defray expenses, was added. As this made the bill self-supporting, they voted to recommend its passage. Next day it was presented to the Senate, and returned for indefinite postponement.

"Now, Wisconsin brothers in bee-culture, I have been at $25.00 personal expense, and wish to say that, if you had done your part, we should have had a law for our defense. Am I going to give it up? Not until we have a State foul-brood law. I know the ground we have to go over, and will for the next two years try to get our bee-keepers interested. If at first you don't succeed, try, try again."

WOOD-BASE FOUNDATION.

Mention is made in Gleanings of foundation made with a base of wood 1/48 of an inch thick. The editor is not very enthusiastic about it, and no mention is made of any cordial approval by the bees.

THE STRENGTH OF BEES.

A French naturalist, Mr. Plateau, has tested various insects to ascertain their strength, and finds that the smallest ones are very often the strongest. According to his experiments, a bee can drag off 30 times as much as a horse can, according to its size. One bee dragged easily 20 others, and showed a power proportionate to a locomotive. What astounding muscular power the bees must have, we think, when we remember that the weight of a whole swarm hangs from a limb, when but comparatively few bees touch the limb itself.—K. R. Mathey, in Gleanings.

TALL HIVES FOR WINTERING AND BREEDING.

Bees are but one branch of my business, yet 25 years ago I started in to put a "point" on them. That point was to *winter* them and have them come out in the spring in as good condition as my cows. I saw that if they could be wintered successfully, the rest would all follow sure. No matter what kind of hives they had, it was the *point* to winter them. I have succeeded surely. But when I say that with all the hives tried, the scores of experiments, and much money paid out, I have as my true and "pointed" friend, the old box-hive, I hear you say, "Fudge; fogy; fool!" But don't judge too quickly, nor call me cranky, for surely my experience proves that I am not. Now suppose you had an acre, or say even 200 tall hives of bees, 28 inches high, just for *breeders*. They would live sure, with all that white honey in them, that is the *point*—they would live, and out-doors, too. You would bore two holes, in or on top the hives, and put a loose box over them. This must be done sure, leave the entrance open as in summer. Mine don't rob, they are all so powerful. I say, if you had them you would not need to look at them during the whole year, only to catch their swarms and put them in small hives, say 7 or 8 inches high, and worked for comb honey for all there was in them until fall, and then take them up, or have an auction and sell them, or do what you please with them. I say you would not call me cranky when you saw your thousands of pounds of—oh, such *white* honey, for you put the swarms from your breeders into *empty* hives to work them each year, and how can your honey be travel-stained? It can't, it is beauty itself. Managed in this way the thing goes right on each year, same as your dairy, and with not much more loss of colonies than cows.—Jno. F. Gates, in American Bee-Keeper.

NEW VS. OLD STYLE MILLER FEEDER.

When the Miller feeder was improved upon, Dr. Miller was very much pleased with the improvement, and we made 25 of the new kind, intending to discard the old ones. But after a thorough trial we liked the old ones a good deal better. In the first place, if there's any leakage it is inside the hive, and that is quite a point. It is more convenient to have one large compartment rather than two smaller ones. The one point that we thought would be of so much value, and prove so much superior to the old one, that of the passageway directly over the brood-nest instead of at the sides, in actual practice has not proven to be so. Just why, I cannot tell. It really seems as if it ought to be; but our old feeders are the ones that are emptied first, and, as a consequence, the new feeders are the ones we use last.—Emma Wilson, in Gleanings.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

The Texas State Convention.

We are expecting a big meeting at our next Texas State Bee-Keepers' Convention, as there are some nice premiums offered for the best exhibits. Don't forget the time—Aug. 21 and 22, 1895. W. H. WHITE, *Sec.*

Deport, Tex.

Bee-Keeping in Louisiana.

My attention was called to the bee and its industrial product about four years ago, on a visit to a colored friend residing five miles southeast of this city. This man had the misfortune to have had his legs affected with ulceration, so much as to cause amputation of one just below the knee, while the other leg remained, and is at present, in an ulcerated condition. Possessing intellectual attainments, and a dependence not prone to his race, he sought a vocation which he could ply in his crippled condition, and a kind Providence led him to an apiary. The physician whom he consulted regarding the purchase of an artificial leg—(Dr. Marshall, with whom a correspondent of the Bee Journal, Mr. M. M. Baldridge, was well acquainted), was engaged in this industry. On my visit he invited me to go through (as he expressed it) his bee-farm, comprising about 25 hives, about one-half being what is commonly termed box-hives, the kind our forefathers used, and the balance in the Gallup frames of all dimensions—in fact, he used boxes for hives obtainable from the nearest grocery, and made frames accordingly. I became much interested at the intelligence and industry displayed by the busy little bee, and began a study of the same, which caused the purchase of the "A B C of Bee-Culture," "Langstroth on the Honey-Bee," and kindred books, and subscribing to the invaluable American Bee Journal. As a result, we have now nearly 300 colonies, all in 8-Hoffman-frame dovetail hives.

I enclose a letter received from my associate, in compliance with my requesting him to furnish me some news. If you deem this and his letter worthy of publication, you have my permission to publish the same. E. R. BERNSTEIN.

Shreveport, La., May 15.

The letter referred to by Mr. Bernstein reads as follows:

MR. E. R. BERNSTEIN:—In compliance with your request I herewith hand you the following data:

I prepared 200 colonies for winter quarters, and this spring, on examining the same, I found my loss was 10. I winter bees on the summer stands, no feeding back being required. I leave about 30 pounds of honey to each colony, and none of the loss was occasioned by starvation; the main cause of the loss can no doubt be attributed to a very severe and rigid winter that prevailed in this locality, it being the coldest ever known here.

In my tour of inspection I found three queenless colonies, one of these showing indications of laying workers. I inserted a frame having six queen-cells, and two frames with larvæ in all stages, and in about two weeks the laying workers had disappeared and this colony had a queen, and was in a prosperous condition. I introduced a queen in each of the other two colonies, and they are also prospering.

To date, I have had 75 swarms from my spring count, and they are in fine condition. My first swarm came out this year April 10; last season the first to issue was March 15.

In my experience I have never seen any foul brood in this locality. Bees are sometimes troubled in the spring with dysentery, but I have not noticed any extent of the same this season.

I have had as many as five swarms to cluster on one limb at the same time, and desiring to produce more honey, I made four colonies out of the five. I divided by placing a portion of the bees in a hive, and placed this hive about 50 yards from the cluster, in order that the remaining bees would not be attracted by the noise of this hive. In the same manner I placed a second and third hive about 50 yards apart; and this distance from the cluster. The fourth hive I let remain near the clustering place. I placed more bees in the hives situated at a distance from the place of the cluster than the one near the clustering place, because a portion of the former would naturally find their way to the place of the cluster.

I always insert in my swarms one or two frames of brood in all stages, and not one of them ever missed their queen. I had an old box-hive, and cut out of it four or five pieces of dark-looking comb, enough to fill out three Hoffman frames; I then placed one of these frames in one of the previously mentioned four hives at 3 o'clock p.m., and at 6 o'clock the same evening I looked to see if the bees had waxed it fast to the frame, and to my surprise I found they stored four pounds of nectar in that frame.

As far as the crop of this year is concerned, all indications point to an abundant yield, and the quality even better than the last crop. The bees seem to work with greater activity and renewed energy, after their winter confinement.

Fairfield, La., May 9. ALEX. WRIGHT.

Lamar Co., Tex., Bee-Keepers' Association.

Thirty people from Lamar and Red River counties, Tex., met recently at Lone Oak, Lamar county, for the purpose of organizing a bee-keepers' convention. The meeting was called to order, and officers elected as follows: President, J. C. McConnell; Secretary, W. H. White. It was decided to call the new society the Lamar County Bee-Keepers' Association.

Various questions were considered as follows:

TRANSFERRING—STARTING IN BEE-KEEPING.

The best methods of transferring were discussed at considerable length, and two colonies in box-hives were transferred, which gave some valuable ideas.

How many colonies should a beginner commence with?

G. A. Gilliam—As many as he has money to buy.

J. R. Hutchinson—He would better go slow till he gets a little experience. Buy a few, and learn to handle them before investing too much.

W. H. White—Two or three, and get a good book and learn their habits, and how to handle them before investing much.

J. G. Barnett—It doesn't make any difference, for it won't be long till he will just have a few.

RACES OF BEES—PLANTING FOR HONEY.

In what do the Italians excel the black bees? R. G. Seay delivered an address on the superior traits of Italians, in which he did the subject justice.

Which is the better, the 3 or 5 banded bees? After a short discussion the subject was dropped without any decision.

Shall we resort to the planting for bee-pasturange? If so, what shall we plant? It was thought best to insist on farmers planting the clovers best adapted to pasture, hay and honey-yielding. A stalk of sweet clover was exhibited. From the experiences given it was thought a good honey-producer in this country. Each member who had bees was advised to plant what he could, and by so doing we could secure a good pasturage all through the season, with but little expense to any.

FARMERS AND BEE-KEEPING.

Should farmers keep bees in the improved plan?

R. G. Seay thought not, that it belonged to specialists, and would be too much trouble.

Dr. D. D. Craddock thought the box-hive plan best for farmers generally.

W. H. White—If they keep bees at all, keep them on the improved plan, as they are the greatest class of specialsts we have. They should keep bees by the improved methods, as they raise their poultry, grain, cotton, and other products of the farm. Each being a special product, each should be kept and worked by the latest and best plans, for if the improved is best for one it is best for all.

Shall we continue our meetings? was asked. It was agreed that we should. As it was getting late, the election of officers was deferred until the next meeting, which will be held the third Saturday and Saturday evening in July, at Lone Oak, 3 miles south of Deport, in Lamar county. All bee-keepers are invited to come. No hotel bills.

Deport, Tex. W. H. WHITE, *Sec.*

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Do Not Fuss With the Bees.—"Do not keep pulling the hive to pieces to see how much brood there is, or do worse, spread the brood to induce the queen to lay."—Canadian Bee Journal.

This advice is given for the benefit of beginners, and they will do well to give heed to it. I know the temptation is very strong to open the hives and see how things are coming on, but in nine cases out of ten this will be done at a loss. If one feels that he must see what is going on from day to day, he would better select a colony for experimental purposes, and let the rest severely alone, aside from the attention they need in order to know when to put on the surplus arrangements, or when to expect a swarm. If one will make it a point to study the bees carefully he will soon learn how to judge of the condition of the colony from what he can see at the entrance. Of course there are times when it becomes necessary to open the hive and remove most, if not all, of the frames. A beginner will find the middle of the day the best time to do this work, and he should make it a point to work as rapidly as he can, so as to disturb the bees as little as possible, and at the same time guard against robbing. Those who are always fussing with their bees are apt to have a good many practical demonstrations of what robbing means.

As for spreading brood, this may work all right in the hands of an expert, but the beginner would better let the queen do the spreading.

Place to Keep Honey.—"When honey is removed from the hive, never place it down cellar; that is the worst thing you could do, because there is always more or less moisture in a cellar."—W. H. Putnam.

At first thought one might be inclined to think this a useless statement, as it has been repeated in various forms a great many times, but it is far from useless. In fact, I know it to be very important, for there is not a season passes but someone says to me he cannot see what hurt it will do to put honey in the cellar. The truth of the matter is that there are a great many who have not learned that it is just as important to take proper care of the honey, and put it on the market in first-class condition, as it is to use the best and most economical means of securing it. One of the essentials of proper care is keeping the honey in a very dry and warm place; especially is this true of comb honey, or extracted honey in open cans. Honey taints very easily, and for this reason I prefer that as little smoke as possible be used when extracting. I remember getting extracted honey once of a first-class producer that had been so tainted with tobacco smoke that I could not eat it. I have no taste, or use, for that matter, for tobacco in any form, and I surely prefer not to have it mixed with my honey.

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By Mail for One Dollar.

Five cross-bars are rivited in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through.

It is easily put together and folds compactly in a case, 1x6x7 inches,—the whole weighing but 5 ounces. It can be worn over an ordinary hat; fits any head; does not obstruct the vision, and can be worn in bed without discomfort. It is a boon to any one whose flies bother, mosquitos bite, or bees sting.

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I will send a Guaranteed 5-Banded Yellow Queen, bred from a Breeder selected from 1000 Queens (some producing over 400 lbs. of honey to the colony); or a 3-Banded Italian Leather-Colored Queen direct from a Breeder imported from Italy. Oct. '94—**at 75c.,** and a special low price for a quantity.

My secret is to sell an extra-large amount, which enables me to sell at low prices. Will run this spring 350 Nuclei—have 1 home and 4 out apiaries. No Queens superior to my Strain.

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	1 lb.	5 lbs.	10 lbs.	25 lbs.
Heavy or Medium Brood	42c.	40c.	39c.	38c.
Light "	44	42	41	40
Thin Surplus	50	47	46	45
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☞ If wanted at those prices, send to

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1895 SAVE MONEY 1895

If you want first-class *FOR BUSINESS,* **ITALIAN QUEENS** **Foundation** at Wholesale Prices, **Hives,** suited for the South, or **SUPPLIES,** send for Price-List—to

J. P. H. BROWN, AUGUSTA, —GA.—
10A13t *Mention the American Bee Journal.*

General Items.

Illinois State Members' Reports.

On account of being so busy I have delayed the reports that have come in from the members of the State Association. The outlook is so poor that not many have sent in their reports, and those who have, speak as follows:

C. Becker, of Pleasant Plains, Ills., answers the questions thus:

1. How many colonies?—40.

2. What are the prospects for a honey crop?—Poor at present.

3. How much honey gathered to date?—None.

4. Is the honey gathered to date No. 1 or not?———

M. Bevier, of Bradford—1. 37 old and one new. 2. 5. 3. None.

S. N. Black, Clayton—1. 10 colonies, and they are weak. 2. Poor—no white clover. 3. None, and there will be no crop.

Peter Blunier, of Roanoke—1. 42, and 6 swarms. 2. Bees are in very good condition, but weather too dry. 3. No surplus, but plenty in brood-nest. 4. I think it is good, as it is all fruit-bloom.

G. W. Cole, of Cantou—1. 10. 2. Poor. 3. None.

A. N. Draper, of Upper Alton—1. 180. 2. Fair. 3. Big crop. 4. Fruit-bloom.

P. J. England, of Fancy Prairie—1. 15. 2. Poor. 3. None. 4. The freeze damaged my berry crop several hundred dollars.

Dr. C. C. Miller, of Marengo—1. About 140. 2. Good as far as can be told. 3. None.

Jas. Poindexter, of Bloomington—1. 150. 2. Though not good, some better than last year. 3. No surplus.

Daniel E. Robbins, of Payson—1. 30. 2. Not very good. 3. 15 pounds of fruit-bloom honey. 4. Very good.

Geo. F. Robbins, of Mechanicsburg—1. 30—several quite weak. 2. Fair. 3. Zero.

J. Q. Smith, President of the State Association, Lincoln—1. 47. Hived first swarm May 22. 2. Very poor. 3. Cannot say; will extract some fruit-bloom honey. 4. No. 1, very choice. (Mr. Smith sent me a sample of fruit-bloom honey, which I think is very fine.—Secretary.)

Walter M. Van Meter, of Era, Tex.—1. 7. 2. Very good. 3. No honey (May 25).

F. C. Vibert, Hockanum, Conn.—1. 3. 2. Poor season, cold weather, hard frost, very dry. 3. None.

Jas. A. Stone, of Bradfordton—1. About 65. 2. Bees did well on fruit-bloom until the freeze put an end to all blooms. Our prospect for white clover was good until the dry weather has nearly ended it. 3. None since fruit-bloom, which all went for brood-rearing, and though no swarms have come out, they are very strong. (Gleanings please copy.) JAS. A. STONE, *Sec.*

Bradfordton, Ill., June 17.

The Season So Far in Minnesota.

I put into winter quarters 225 colonies the forepart of Nov., 1894, and put them on the summer stands March 29, 1895, all alive. One swarmed out the same day, and 28 of them did the same thing within two weeks

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Quality always the best. Price always lowest.

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Reference—Augusta Bank. 16Atf

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One	Untested	Queen	before June 1st	$1.00
Six	"	"	"	5.00
One	"	" after	"	.75
Six	"	"	"	4.20
One	Tested	" before	"	1.50
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Thin Flat-Bottom Foundation

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Being the cleanest is usually worked the quickest of any Foundation made

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IMPORTED Italian Queens reared this yr., $3.50 each. Tested Queens—**Breeders**—$1.50 to $2.00 each.
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From Texas. My Bees are bred **For Business,** as well as for **Beauty** and **Gentleness.**

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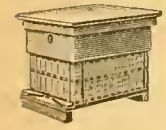

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19A8 Please mention the Bee Journal.

GARDEN CITY, Kan., May 13. 1895.

P. J. THOMAS, Fredonia, Kan.—

Honor to whom honor is due. The Queen you sent me proved the best out of six I bought from different Breeders.

J. HUFFMAN.

Big Yellow Golden Italian Queens 75c

Three for $2.00. Three-banded, same price. 1-Frame Nucleus, with Untested Queen, $1.75 2-frame, $2.25. Satisfaction guaranteed.

P. J. THOMAS, Fredonia, Kan.

Mention the American Bee Journal. 22A5

GLOBE BEE-VEIL

By Mail for $1.00.

A center rivet holds 5 spring-steel cross-bars like a globe to support the bobinet Veil. These button to a neat brass neck-band, holding it firmly.

It is easily put together; no trouble to put on, or take off. An absolute protection against any insect that flies. Will go over any ordinary sized hat; can be worn in bed without discomfort; fits any head; does no obstruct the vision; folds compactly, and can be carried in the pocket; in short, it is invaluable to any one whom flies bother, mosquitos bite, or bees sting.

GEORGE W. YORK & CO.,

CHICAGO, ILLS.

after putting them out. My bees have not done this for many years. The old bees dwindled down very rapidly, so that some colonies had hardly anything but newly hatched out bees, but with plenty of bloom they pulled through, and to-day most of them are in good condition. A few commenced to swarm 10 days ago, but let up again the past week. None of them have yet worked in supers, but as white and Alsike clovers are now in full bloom, they will probably store some surplus honey soon; though all the clovers are badly damaged by the last year's drouth and late hard frosts this spring.

We never had such extreme weather here in Minnesota, of heat and cold, as we had this spring, in 40 years. April and May the mercury went up to 85 degrees, and 94 degrees May 9; on May 14 it went down to 25 degrees in the morning, and killed nearly all tender vegetation, also all the buds of the lindeu, which were out abundautly. Wild crops were also killed, but are in bloom now the second time.

The prospects for white honey this season are not very encouraging in this vicinity, though we may have a good crop of amber and dark honey, as most of the vegetable kingdom has recovered from the effect of the extreme weather. We had a fine, gentle rain a few days ago, and a number of heavy showers yesterday, everything looks refreshed and prosperous. Small grain looks fine. Winter rye is in bloom—bees are working on it. Corn is three to six inches high, and looks good. There is hardly a sign left that much of it was cut down to the ground by the heavy frosts. The heat and frosts reminded me of the weather in Texas the past winter, when I was there. It was almost one-half as bad here as it was in Texas. C. THEILMANN.

Theilmanton, Minn., June 3.

Prospective and Retrospective.

A certain author said: "Man is greatly affected by the conditions that surround him." I think this thought very closely applies to bee-keepers at times, at least in my case it is so.

During the warm days of last autumn my 17 colonies of bees made it seem as though summer had not yet departed, and their keeper was happy laying plans for the next season's campaign, and drawing pictures on the blackboard of his mind. One was an apiary of some 30 colonies of bees in neat frame hives, all neatly arranged under the apple-trees, while their owner was smillingly setting of and on the section-cases. A pleasant picture, surely! But, alas, for the blighted hopes. How true are the words of our own poet, "Of all sad words of tougue or pen, the saddest are these, 'It might have beeu'"—if it hadn't been for honey-dew.

How differeut a picture reality presents. Three colonies in box-hives, trying to make up in activeness for lack of numbers, and 14 hives filled with dead bees, and filthy, bedaubed combs.

I should not have the three prosperous colonies had I not bought them late last fall of a neighbor. They stored no surplus,

SPECIAL OFFER.

For July and August only. To those who have never tried our strain of Honey-Gathering Italians, we will make this Special Offer for July and August only, to introduce our Bees in your locality: We will send one Warranted Queen in July and Aug. for the trifling sum of 50 cts. **Remember,** the Queens we are going to send out for 50 cts. are warranted to be purely-mated, and if not, send us a statement of the fact and we will send another free of charge. Only one Queen will be sent at the above price to one address. If you want any more you must pay full price as per Table of Queens in our Circular, which we mail with each Queen. Address all orders to-

Leininger Bros., Fort Jennings, Ohio.

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A Steam Bee-Hive Factory. Send for Free Catalogue and Sample Copy of "The Southland Queen."

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GOLDEN QUEENS Solid Yellow, $1; Yellow to tip, 75c.; darker 60c. Tested, $1 to $2. Breeders, $3. Best, $5. Samples of Bees, 2c. None better for Honey, Beauty and Gentleness. Ready now. Fully guaranteed. F. C. MORROW, Wallaceburg, Ark.

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We have finally succeeded in finding a Paste that will stick labels to tin, glass, etc.—just thing bee-keepers have wanted. It will do the business wherever any "stickum" is required. It is guaranteed to do the work. It is put up ready for immediate use, in the following size packages, and at the prices given, by express: ½-gal., 70c.; 1 gal. $1.00; 2, 3, 4 or 5 gals., 75c. per gal. It weighs about 8 lbs. to the gallon. Sample of Paste, postpaid, 25c.

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Send for Price-List } BEES AND QUEENS For Sale.

21A17 *Mention the American Bee Journal.*

YELLOW TO THE TIP— Are the Italian Queens that I can send by return mail at $1.00 each or six for $5.00. Not one in 100 will prove mismated, and any that do not produce three-banded Bees will be replaced. Tested Queens after June 15th, same price as above.

W. H. PRIDGEN,

22A5 CREEK, Warren Co., N. C

Mention the American Bee Journal.

and were well stocked with white honey. One thing I think I have learned is, never to attempt to winter bees on honey-dew. May its visits be few and far between.

On page 378, J. S. Scott says: "A good way to equalize the strength of colonies of bees in spring is to change the hives around." I tried it. Result: Lost both of the weaker colonies experimented with. In both cases the queens of the weaker colonies were killed, or died very suddenly through fright, joy, or some other cause. One was a recently introduced Italian; the other a native black queen. It proved too short a kink for those queens.

Bees wintered badly as a whole last winter, in this locality, but the outlook is fair for what are left.

"Better late than never," I hope will apply to rectifying mistakes. Some time ago E. Tarr, of "Haystack Mountain Apiary," was credited with a crop of 7,500 pounds of honey. It should have read "1,500 pounds."

O. B. GRIFFIN.

Caribou, Maine, June 1.

A Report.

Last spring I started with one colony, and this spring I had three good ones. I obtained 146 pounds of honey last season.

ISRAEL GROSS.

New Lexington, Pa., June 10.

May be a Dragon-Fly.

A new bee-killer—an insect which flies, of greenish color, with a silver stripe on the back in the form of a diamond. I saw it kill about 20 bees, and kill them instantly. What is it? HORACE BUKER.

Rossie, N. Y.

[The description is too meager. It may be a dragon-fly.—A. J. COOK.]

Prevention of Brace-Combs.

After reading J. M. Moore's letter on page, 375, I feel pretty sure that the spacing-tacks have nothing to do with the matter of brace-combs. If he will cut away the shoulders of his Hoffman frames, and then use tacks that will keep the top-bars just as far apart as they were before, I think he will find there will be no change as to results. There is a difference that he mentions, however, that I am beginning to think may have some bearing on the case. His Hoffman frames are spaced 1⅜ from center to center—probably a little more on account of bee-glue—while his other frames are spaced 1¼. On page 376, H. F. Johanning says: "I find that by spacing close, I prevent (or at least I think I do) braces between the combs." Not a great while ago I found a novice who had wintered a colony in fine condition with 9 frames in a space of less than 12 inches. He said the bees built brace-combs if he used only 8 combs. While such close spacing may prevent brace-combs, I doubt if it is the best thing, and the same end can be reached with spacing 1⅜ or more. All that's needed is to have a small space between top-bars—not more than ¼ inch. So the thing needed is to tack on strips on the top-bars at the sides, so as to make them 1⅜ wide; only it will be better to have the strips wider than the ⅜ thickness of the top-bar, for a top-bar ⅜ thick is not so good as one thicker. Some think ⅝ is thick enough, but for myself I prefer ⅞. GLEANER.

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Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains 250 pages, and 245 illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, $1.00.

Langstroth on the Honey-Bee, revised by Dadant—This classic in bee-culture, has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages; bound in cloth. Price, $1.40.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages; bound in cloth and fully illustrated. Price,

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of Queen-Bees are reared in perfect accord with Nature's way. 176 pages, bound in cloth, and illustrated. Price, $1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopedia of 400 pages, describing everything pertaining to the care of the honey-bees. It contains 300 engravings. It was written especially for beginners. Bound in cloth. Price, $1.25.

A Year Among the Bees, by Dr. C. C. Miller.—A talk about some of the implements, plans and practices of a bee-keeper of 25 years' experience, who has for 8 years made the production of honey his exclusive business. It gives full particulars about caring for bees throughout the whole year. 114 pages, bound in cloth, and illustrated. 50 cts.

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Thirty Years Among the Bees, by Henry Alley.—Gives the results of over a quarter-century's experience in rearing queen-bees. Very latest work of the kind. Nearly 100 pages. Price, 50c.

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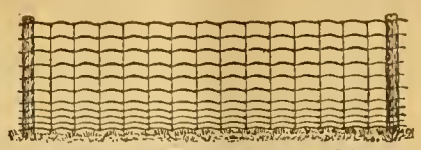

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This department is only for your "Wants" or bona-fide "Exchanges," and such will be inserted here **at 10 cents a line** for each time, when specially ordered into this department. Exchanges for cash or for price-lists, or notices offering articles for sale, will not be inserted here—such belong in the regular advertising columns, at regular rates.

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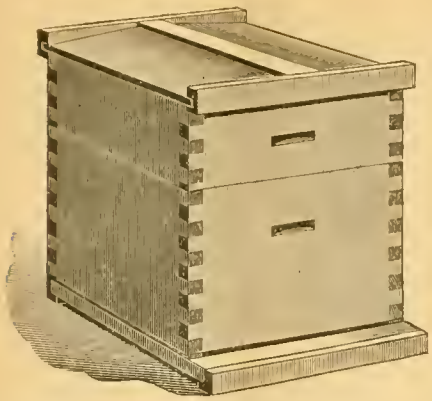

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Honey & Beeswax Market Quotations.

CHICAGO, ILL., June 7.—We have our usual dull season which we look forward to and expect. Honey is entirely forgotten during the months of June, July and August. The market is pretty well cleaned up of all grades of honey, so the prospects are encouraging for the coming season. We are getting 13@14c. for light comb. J. A. L.

KANSAS CITY, Mo., June 19.—Supply and demand is light. We quote: No. 1 white, 1-lbs., 13@14c.; No. 2 white, 12@13c.; No. 1 amber, 11@12c.; No. 2 amber, 8@10c. Extracted, white, 7c.; amber, 6c.; dark, 5c. Beeswax, 22c. C. C. C. & Co.

CINCINNATI, O., June 18.—Nothing new since our last. There is a fair demand for extracted honey at 4@7c. Comb honey is in slow demand at 12@14c. for best white. Beeswax is in good demand at 25@31c. for good to choice yellow. C. F. M. & S.

CHICAGO, ILL., May 23.—The trade in comb honey is very light at this time of the year—as it is between seasons. Soon we will get the new crop, and it will come on a bare market. Just now what little comb sells brings 14c. for the best grades. Extracted, 5½@7c. All good grades of beeswax, 30c. R. A. B. & Co.

PHILADELPHIA, PA., June 18.—The new crop of comb honey is arriving slowly, and is in fair demand. No new extracted honey has arrived in this market as yet. We quote: Comb honey, 9@13c. Extracted, 4½@6c. Beeswax is still declining. The adulteration of beeswax has demoralized our market this spring, and has hurt our sales considerable. Price, 25@27c. W. A. S.

NEW YORK, N. Y., May 24.—White comb honey is well cleaned up. Considerable buckwheat remains on the market, and, as the season is about over, some of it will have to be carried over. Extracted is doing fairly well, with plenty of supply to meet the demand. New southern is arriving quite freely. We quote: Extracted, white, 6@6¼c.; amber, 5@5½c. Southern, common, 45@50c. per gallon; choice, 60@65c.

While beeswax holds firm at 31@32c., we think it has reached top market and do not expect it to go higher. H. B. & S.

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PERFECTION **Cold-Blast Smokers,**

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Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Breeding Out the Swarming Habit in Bees.

Query 977.—1. Is it possible to breed out the swarming habit?

2. Would it be a desirable thing if it could be done?

B. Taylor—1. No. 2. No.

Dr. J. P. H. Brown—1. No. 2. No.

P. H. Elwood—1. I think so. 2. Yes.

C. H. Dibbern—1. I think not. 2. No.

Rev. M. Mahin—1. No! 2. I think not.

G. M. Doolittle—1. I think not. 2. Yes.

W. R. Graham—1. I think not. 2. I think not.

R. L. Taylor—1. To some extent, no doubt. 2. No.

H. D. Cutting—1. "Give her up." 2. All things considered, I think not.

Mrs. J. N. Heater—1. I think not altogether. 2. I do not think it would.

Prof. A. J. Cook—1. Nothing is impossible for us mortals. 2. Certainly.

Chas. Dadant & Son—1. We think not. 2. We are afraid we would also breed out their industry.

J. M. Hambaugh—1. I am of the opinion it would be a very uncertain task. 2. I am not sure that it would.

Wm. M. Barnum—1. I doubt if it would be possible. 2. No. A modification is desirable at times, however.

Eugene Secor—1. Perhaps it can be done in time—a thousand years or so—if persisted in. 2. I am not sure on that point.

Jas. A. Stone—1. I do not think it is. 2. I, for one, would desire it—as I have generally increased my colonies by dividing.

E. France—1 and 2. I don't think it is. I would a great deal rather my bees would be contented and not swarm. I woud divide them to suit myself.

Rev. E. T. Abbott—1. Not unless you change a bee into some other animal. 2. No; not if we are to continue to keep bees for the honey they produce.

W. G. Larrabee—1. No. 2. I hardly think so, for if bees have no desire to swarm or to increase, they would not build queen-cells, and without queen-cells how would we increase?

Dr. C. C. Miller—1. As it is not essential for the existence of a colony, and as some bees are more given to swarming than others, I don't see anything impossible in having bees not given to swarming at all. 2. Very decidedly for most persons.

J. E. Pond—1 and 2. No, sir! and it would not be advisable or desirable so to do, in my judgment. In order to do this it would be necessary to breed out all the present instincts of the bee, and what the result would be, were it possible so to do, let him tell who can.

Allen Pringle—1. As the "swarming habit" is one of the very strongest habits of the honey-bee, while my faith in the possibilities of artificial as well as natural selection in the breeding of the bee, as well as other animals, is strong, I think it would take a good deal of persistent effort through a good many thousands of years to get that habit bred out! I could not, therefore, conscientiously advise the querist to begin to undertake a job like that. 2. It would, I think, be desirable, provided the breeding out of the swarming habit did not at the same time breed out that *work-with-a-rush* habit which now accompanies the swarming habit.

G. W. Demaree—1 and 2. I guess not, and if it could be done, I would not want the bees, because such bees would not be *all-purpose* bees. I sometimes want some prime swarms, and if I don't want my bees to swarm, I prevent them by raising the sealed brood above the queen-excluder. This answers both of your queries.

Mrs. L. Harrison—When the "swarming habit" has been bred out of the human family, I'll try bees. 2. No! Is the creature wiser than the Creator? The Lord knew what he was saying, when he said, "It is not good for man to be alone." Swarm out and start a new home is Nature's way of increasing bee-families.

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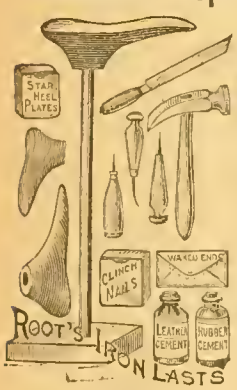

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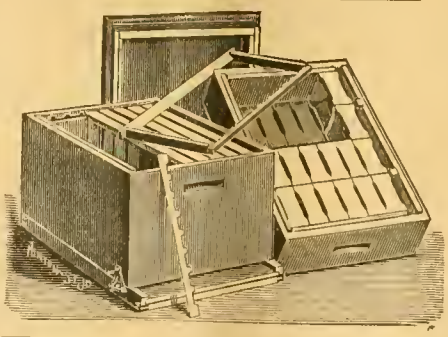

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THE OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS

35th Year. CHICAGO, ILL., JULY 4, 1895. No. 27.

Contributed Articles.

On Important Apiarian Subjects.

In-and-In Breeding—Question Answered.

BY G. M. DOOLITTLE.

A correspondent writes that he has an apiary of about 80 colonies, and in it there are two colonies which give the best results in honey, capping the same very nice and white, the queens of which are very prolific, and the bees winter in excellent condition every winter. He says that he would like to propagate these bees for their good qualities, and is desirous to know whether the rearing of queens from one and drones from another will answer, as the two are sisters. He seems to think that such in-and-in breeding might tend to make the future generations of his bees weakly.

If we were sure that both parentages were alike, there might be some chance of making our bees weak by in-and-in breeding, but as it is almost certain that they are not, such breeding as is proposed could not be directly in-and-in breeding. While I do not indorse the Dzierzon theory to its fullest extent, yet it is sufficiently accurate so that, practically speaking, the drones and queens from any mother cannot be brother and sister. Now, if our correspondent rears his queens and drones from the same mother, the queens can do

Staminate and Pistillate Willow-Blossoms.—See page 425.

The Pink Lady's-Slipper.—See page 425.

no more than mate with a half brother, unless this mother-queen mated with a drone from her own mother. In this latter case we should have only ¾ blood, unless the grandmother to our young queen mated with a drone produced by her mother. Should such a thing as this happen (and it would not be liable once in 10,000 times), we would get only ⅞ blood, even then, by breeding drones and queens from the same mother. Here is a point not generally understood by very many of our bee-keepers, if the questions asked me on this in-and-in breeding matter is any criterion to go by, and one which shows the wisdom of the Creator of the bee. But to return to the origiual question:

Suppose our correspondent rears his queens from one queen, and the drones from the other, as he proposes. It is in no way likely that both of the queens mated with brother droues; hence the young queens will be only half-blood relation to the sister of the mother-queen; and as the drones will be only half-blood relation to the mother of the queens, he cannot possibly get a relation nearer than ¼. Hence it will be seen that, with no control of the drone, our improving our bees in any one special direction must be only a slow affair at best, and one in which in-and-in breeding has no very important bearing.

Now, suppose we have it all arranged as we wish, and on July first we commence to rear our queens, having plenty of drones flying from the aunt of these young queens. And to make matters more sure, suppose that we have drone-traps on each hive in the apiary, except the one we have selected for drones, what proportion of these young queens will mate with the drones we wish them to? Well, that will depend upon how near there are other bees to our apiary. If, as we find it usually, not one queen in five will mate the desired drones at this time of the year. It is a rare thing to find an apiary where there are not some bees kept within three or four miles of it, or where there is not some tree in the woods that contains bees. This tree, or one of these hives kept by most bee-keepers, will furnish more drones than the breeder will get from his selected colony, as a rule; for colonies which have no attention given them are very prolific in drones. I am satisfied that all the drones of one vicinity have a certain place where they congregate, and that the queens go to this congregating place when they fly out, which results, as I said before, in the chances being against queens mating as the breeder wishes.

To illustrate: In 1872, Italian drones were reared for the first time as near as three miles of my apiary. That season I purchased an Italian queen, but she gave no drones, as I did not get her until July. There were none but black bees about me up to this time, and no queens had ever shown any yellow in their offspring. This year about one queen in eight gave workers that were hybrids, many of them being finely-marked Italians. With this positive proof before me—that bees mix to a large extent when separated three miles—I am much surprised when reading the statement of some, that half a mile is distance enough apart to keep two races of bees pure. I find that this congregating of drones and queens occurs only during our summer months, with perhaps a part of September. As the weather becomes uncertain, the loud humming that has been heard on all pleasant days, at a certain place, between the hours of noon and 3 o'clock in the afternoon, ceases. I find that from then on, I am much more sure of having my queens mated with the desired drones than at any other time of the year, unless it be in early spring.

Again, at this season of the year, nearly all the drones are killed off, except those especially kept by the apiarist, so that when it is possible to rear queens at this season of the year, and we have a few pleasant days, in-and-in breeding can be more nearly accomplished than at any other time of the year, yet as I have shown above, not enough so to cause our bees to deteriorate very much in some time. If after we find all drones killed off except those we have preserved, we go to the hive having our drones some cool, cloudy day when the hives can be kept open as long as we choose without danger of chilling the bees, or without danger from robbers, and pick out all of the inferior drones as to size, color, or any other imperfection, and kill them, we shall then have something from which we can improve our stock in the way we are desirous of doing, and still have it becoming more valuable along other lines as well.

Boredino, N. Y.

What Dr. Miller Thinks.

Spacing Frames.—I am interested in the article of Mr. Doerr, page 389, especially as he says, "I have no trouble with brace-combs." Will he please tell us whether the top, bottom and end bars are all the same width, one inch? Also, what is the thickness of the top-bar? As I understand it, when Mr. Doerr holds a frame up before him, the nail on the side of the top-bar facing him is on the left end, while on the bottom-bar it is on the right end. Please tell us why they are not both at the same end.

In some respects I like something of this kind better than the spacing of the Hoffman frame, but there is one respect in which the latter has decidedly the advantage. When you attempt to take out a Hoffman frame or put it back, there is no danger of one frame catching on the other, but with the spacing nails there is, I should think, danger that the nail of one frame will catch in the bar of its neighbor. How far apart must the frames be pushed so you can easily put another frame between them?

His plan is excellent in one very important respect—it makes a very small point of contact between two frames.

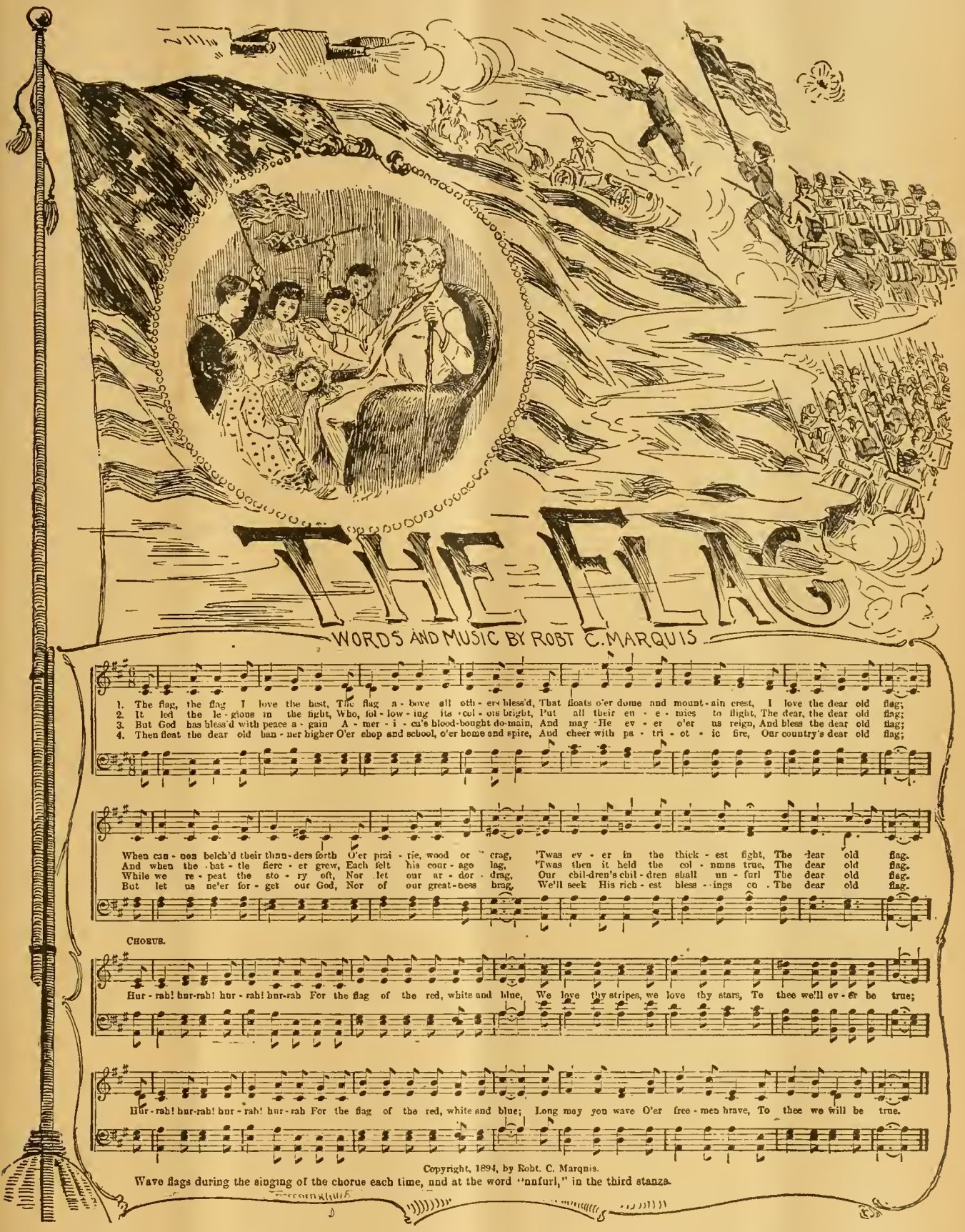
Bees and Strawberries.—On page 390, Mrs. Harrison gives Bro. Abbott a little lift, and I have a card from A. F. Ames, Claremont, Va., who says: "Here in the South I've seen bees work on strawberries fully as strongly as they will on almost any plant. Can't say whether they get much honey, but they certainly do pollen."

Mrs. Harrison, the fact that peach seed produce fruit like the parent tree does not in all cases prove that bees don't work on them. White clover is worked by bees, but it produces like plants. If there were many kinds of white clover, we should expect the bess to mix them, and if a number of different kinds of peaches were growing near, the bees ought to mix them, but if a number of the same kind were in one place, then there need be no mixing.

Big Box-Hives.—One paragraph in C. Davenport's article, page 391, makes me feel like leaning toward John F. Gates' plan of tall box-hives for breeders. That paragraph says bees wintered without protection and without loss for 15 years in hives about 13 inches square and 18 to 24 inches high, and first swarms from them gave more surplus than others. I honestly believe that some would do well to go back to big box-hives. But what does he mean by picking out the biggest of his big queens and then calling it nothing more than "fair-sized?"

Five-Frame Hives.—I would like to ask whether the plan proposed by W. D. French, on page 392, that is, keeping bees on five frames through the most of the season, has been followed for a series of years, and has produced good results. The general teaching has been that such "swarms" would be rather small and undesirable.

Color of Bees.—John McArthur reasons rightly on page 292, that color alone should not condemn a colony of bees. If any one is trying to drive out yellow bees simply *because*


THE FLAG
WORDS AND MUSIC BY ROBT C. MARQUIS
1. The flag, the flag I love the best, The flag a - bove all oth - ers bless'd, That floats o'er dome and mount - ain crest, I love the dear old flag;
2. It led the le - gions in the fight, Who, fol - low - ing its col - ors bright, Put all their en - e - mies to flight, The dear, the dear old flag;
3. But God has bless'd with peace a - gain A - mer - i - ca's blood-bought do-main, And may He ev - er o'er us reign, And bless the dear old flag;
4. Then float the dear old ban - ner higher O'er shop and school, o'er home and spire, And cheer with pa - tri - ot - ic fire, Our country's dear old flag;
When can - non belch'd their thun-ders forth O'er prai - rie, wood or crag, 'Twas ev - er in the thick - est fight, The dear old flag.
And when the bat - tle fierc - er grew, Each felt his cour - age lag, 'Twas then it held the col - umns true, The dear old flag.
While we re - peat the sto - ry oft, Nor let our ar - dor drag, Our chil-dren's chil - dren shall un - furl The dear old flag.
But let us ne'er for - get our God, Nor of our great-ness brag, We'll seek His rich - est bless - ings on The dear old flag.
CHORUS.
Hur - rah! hur-rah! hur - rah! hur-rah For the flag of the red, white and blue, We love thy stripes, we love thy stars, To thee we'll ev - er be true;
Hur - rah! hur-rah! hur - rah! hur-rah For the flag of the red, white and blue; Long may you wave O'er free - men brave, To thee we will be true.
Copyright, 1894, by Robt. C. Marquis.
Wave flags during the singing of the chorus each time, and at the word "unfurl," in the third stanza.

they are yellow, such a one is certainly making a mistake. Equally as great is the mistake of pushing a strain of bees simply *because* they are very yellow. I supect there are some very poor bees that are very yellow, and against such it is right to raise a proest. But a strain of bees of good working-qualities would suit me all the better for being at the same time remarkable for beauty.

THE SEASON.—The description of the season up to June

2, that Mr. Pringle gives on page 393, is a very remarkable one. Nevertheless it fits almost precisely—perhaps I might leave out the "almost"—to the season right here at Marengo. But a distinct divergence comes if he is correct in his anticipation of good behavior on the part of white clover. The season is now well on its way (June 20), and white clover appears to be, as it was last year, an utter failure. Marengo, Ill.

Wintering—Rearing Queens—Swarming.

BY CHESTER BELDING.

I put 61 colonies into winter quarters in first-rate condition. I requeened, last season, all that showed signs of not being prolific, and as we had a good fall flow of honey they were well bred up, and had plenty of stores. I use 10-frame Langstroth hives, winter them on the summer stands, and put on outside cases, packed with leaves and fine planer shavings. The hives were entirely snowed under for nearly six weeks, and the bees suffered from dampness. The loss was eleven colonies, and some others badly reduced. Three colonies were left unpacked, and one of them is now in the best of condition. I *think* if all had been left without outside cases, and given more ventilation underneath, the loss would have been less, as neither of the unpacked colonies died out.

REARING QUEENS FOR REQUEENING.

Now about increase, or rearing young queens for requeening: My plan has been for years to secure all the cells possible from a few of my earliest swarming colonies, and give them to nuclei, or to kill a played-out queen and introduce the cell just before it hatches. This *I think* gives me a strain of working bees that cannot be excelled by any other mode of procedure, or at least it has done for me what I fail to get from any queens I buy, reared by a forced process, as practiced by our queen-breeders, even from high-priced selected or imported mothers.

And then another point that, from experience we have stuck a pin at, is not to purchase an untested, low-priced queen of a breeder that sells high-priced tested ones; or, in other words, if you have from three to five dollars to put into queens, instead of paying the five dollars for one, get five for the same money, and, ten to one, if your breeder is a reliable person, you will get more than one out of the number that will be a hustler. I speak somewhat from experience, and I now have some 10 of this class of queens in my yard, purchased from six different breeders last season, and I shall note results this summer, but as yet none of them comes up to my own stock reared from cells from first swarms.

PREVENTION OF SWARMING.

How to prevent swarming is not a troublesome query with me. I have not been troubled that way for years, even in the most prosperous seasons. I do not average 10 swarms from 50 colonies. I use 10-frame hives, give plenty of room for the queen to lay, put on the sections in due time, and ventilate if necessary by raising the front of the hive. Then I think that bees are subject to change considerable by reason of proper modes of treatment and manipulations of hives, fixtures, etc., at required times, and thus their swarming instincts are somewhat changed or diminished.

Middletown, N. Y., May 27.

Balling Queens and Moving Eggs.

BY I. W. BECKWITH.

I wish to give my experience with bees balling their queens, and so answer Query No. 969, on page 291.

During some 12 years that I kept bees in Nebraska, I do not know that I had but one case of balling, though I handled them a great deal, but during two years at Ft. Lupton, this State, I had much trouble, especially the second year, and at this place it is still worse.

In some kinds of weather, especially if it is a little cool, I can hardly disturb a colony without having their queen balled. This is more especially the case with virgins. Joseph Shatters, of Lupton, told me that he overcame that difficulty by keeping his young queens in very small nuclei of not more than 100 bees, till they commenced laying. I tried his plan, only I put more bees in a nucleus, and have no more trouble with the virgins, but I cannot make a success of bee-keeping and keep the old queens with so few bees. Though, by-the-by, I have not tried it.

I have some times thought the young queens were balled by having the hives jarred by the wind, or perhaps without even a jar.

I have noticed that when the bees were not working any, and had no brood, they never ball their queens, no matter how much they are disturbed.

I think the condition of the atmosphere has much to do with it. I am here at an elevation of about 6,000 feet, and it is now (May 24) the driest ever known here. There has been no rain this spring, and the grass is just as dead as in winter, except where snow-drifts melted. The drier, the more trouble, I think.

Probably "Indiana's" informant lived in a climate similar to this, so that stimulating the bees to activity in cool weather induced balling.

BEES MOVING EGGS.

The members of the Southwest Texas bee-convention seemed to be unanimous, and some of them emphatic, in asserting that bees do not move eggs; and several of them gave their reason for that belief, viz.: moving eggs from one cell to another would require reason, and as bees do not reason, therefore they do not move eggs.

Not long ago "Mrs. Atchley" published an article in the American Bee Journal in which she claimed that mankind is the only animal that is endowed with reason. I do not propose at present to discuss the question of animals reasoning, though I might relate many anecdotes illustrating the reasoning power of beasts, bees and other animals, and if she will wake up a little memory that is at present dormant, she could probably tell just as many.

None of the members of that convention had read any of the instances recorded where bees have moved eggs, or they had forgotten them, or believed the writers untruthful. I have witnessed several cases of egg-moving myself—not the act of moving, but the work after it was done—and I supposed it was of such common occurrence that it was not worthy of remark.

I wish Willie Atchley would take a queenless colony and give it eggs only in a very old, black comb, putting this comb at the side of the hive, and then put new, empty combs next, and report result. If I should say, "It is not possible that bees gather and store honey for future use, for that would require reason, and bees do not reason," these same persons would say, to themselves, at least, "Beckwith is in the same condition mentally as the bees:" but if the bees can do the one without reason, they can the other. Grover, Colo.

"Many Heads, Many Minds"—Wintering Bees.

BY REV. STEPHEN ROESE.

On reading and reflecting upon the various reports of bee-keepers, we might form the opinion that the "Old Reliable" was wrongly named, but being fully aware of the fact that the American Bee Journal is only the humble servant or medium through which so many speak, we will have to refrain

from rendering judgment so rashly, for the "Old Reliable" is just as reliable under the management of George W. York today, as it was in the days of Samuel Wagner and Thomas G. Newman.

On page 285, we find a statement under the heading, "Upward Ventilation with a Vengeance," written by Thad. Smith, who relates that in Kentucky he found a box-hive in March that had lain all winter upside down, with no covering over the combs, it having been supposed that the bees were all dead. To his surprise he found live bees in it, although in December the thermometer was down to 14° below zero, and in February 18° below, and either down to zero or below every day for three weeks in February. On page 191, we find a statement by J. A. Bearden, of Cyruston, Tenn., saying he had three colonies of bees die during the last blizzard, and one in particular, a very strong colony, had 14 pounds of honey left, a proof that they froze to death, Mr. Bearden says, although Mr. Abbott says bees don't freeze, and so does not agree with him. Now here we find different heads and different minds, and many heads will have many minds, but the bee-keeping fraternity should be of one mind more so than any other class of people, and not be like the Dutchman of the old fatherland, who gathered a bag full of frogs, and carried them to a smooth, clean place, and then shook them all out to find out if they all would be of one mind. After he emptied the sack he found, to his surprise, that in a few moments they were scattered all over, no two even going in one direction. The astonished Dutchman remarked, "Well, I declare; many heads, many minds."

Now Mr. Bearden, down in Tennessee, says he has kept bees for five years—a short experience—and he differs from Mr. Abbott—a man who has been a bee-keeper for many years. But by the time Mr. Bearden keeps bees five years longer, he may have his attention called to the frog, which is hopping in the starving direction, for it is a settled fact that in this latitude bees will not freeze to death, not even under a temperature of 50° below zero—at least not so long as the cluster is in reach of stores. Bees will often winter-kill, and have plenty of honey left in the hive, but it is away from the cluster, and during a continuous spell of cold weather bees will rather starve than venture to leave the cluster in search of food. But the bee-keeper who thinks he knows it all, and his experience is the only "law and gospel," will find in the end that he has to learn as long as he lives. Maiden Rock, Wis.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

"Ten New England Blossoms."—I often come across books in my reading, about which I think I would like to tell the readers of the Bee Journal, but occasionally I find one of which I feel I *must* write, because the contents cannot fail to be interesting and beneficial to all bee-keepers. I have just been reading a work of this kind, entitled, "Ten New England Blossoms and their Insect Visitors," by Prof. Clarence Moores Weed; published by Houghton, Mifflin & Co., of Boston, Mass. Mr. Weed is a professor in the New Hampshire Agricultural College, and, whether he knows it or not, has done the bee-keepers of the country a great service in writing this beautiful and interesting, as well as instructive, little book. The publishers, too, have done their part, as it is printed in bold, clear type, on fine paper, and is profusely illustrated. Some of the illustrations are real gems. One of them, which, by the way, is a photogravure of the Professor's little daughter, is perfectly exquisite. [The two illustrations on the first page of this number, are from this book.—Ed.]

I do not know any better way to give a clear idea of the great value and admirable spirit of this work than to make a few quotations from it. Speaking of the interest taken in botany at the present time, he says:

"Since man has learned that the universal brotherhood of life includes himself as the highest link in the chain of organic creation, his interest in all things that live and move and have a being has greatly increased."

Again, drawing an illustration from the work in which he is engaged:

"Nature is conducting a vast experiment station in which her creatures are acting and re-acting on each other, mercilessly eliminating those which do not meet the requirements of life, but encouraging those which do."

Take this on the relation of insects to man:

"Few people realize the extent to which man is indebted to insects for his own subsistence. A large proportion of the fruits and vegetables upon our tables is the direct result of the pollinating efforts of the bees and their allies. One of the most common causes of the whole or partial failure of the crops of orchard fruits is the inability of the bees to do their work on account of rainy weather. This was strikingly illustrated during the season of 1894. In southern New Hampshire the weather during the blossoming period of pears, apples and other orchard fruits was very dry, so that for at least two weeks the bees had ample opportunity to work. The result was an extraordinary crop, nearly all the trees setting a large proportion of their blossoms. In southern New Jersey, during the same season, when trees and vines were in bloom, there were frequent and heavy rains. The result was a marked failure of the crops, due very largely to the prevention of pollen distribution."

And so he goes on for ten chapters, telling the story of ten New England flowers and the insects which visit them. While this is the expressed purpose of the book, he incidentally discusses the theory of the pollination of plants by insects, and its relation to the fruit produced, in a way that can be fully understood by any boy or girl, but with that scientific accuracy which makes the book interesting and helpful to the older members of the family, and even to the close student of this subject.

I will not take space to say more at present, as I may have occasion to quote from the work in the future; and, as it costs only $1.25, I hope many of the readers of the Bee Journal will secure a copy and read it for themselves. It is an ideal book for a family of children, or a Sunday School library.

Introducing Queens.—"Before the new queen is introduced the colony should have been queenless three days (72 hours).....No wise bee-keeper will open a hive for several days after a queen is introduced, the queen gets excited, and sometimes the bees 'ball' her."—Henry Alley, in Apiculturist.

It seems strange to me that many experienced bee-keepers will continue to advise making the colony queenless three days before the new queen is introduced. I can see no reason why three days' time should be lost during the honey-flow when every day counts. I put the new queen in the cage on the colony to which she is to be introduced and leave her there for two or three days, paying no attention to the old queen. At the end of that time I hunt out the old queen, pinch her head off, turn back the wire so the bees can get at the candy and release the new queen, and then close up the hive as quickly as possible, and let it alone for two or three hours. Presto! the old queen is out, the new one is in, and very little time has been lost. After I think sufficient time has elapsed for the bees to release the queen and get quiet, wise or otherwise, I invariably examine the colony and see that everything is all right. In years of experience of this kind I have never had a colony "ball" a queen because the hive was opened. If I find on examination that they are disposed to mistreat her majesty, I put her back into the cage, close the entrance with a chunk of honey, give the bees a good smoking, and let them eat her out again, which generally ends all trouble.

The "Trial Trip" Offer of the Bee Journal to those not subscribers—10 weeks for 10 cents—will be withdrawn July 15. This is positive. It is hoped that all who have taken advantage of our liberal "short term" offer will so appreciate the Bee Journal as to subscribe for a year at the expiration of their 10 weeks. Remember, the time for sending in names on the 10-weeks-for-10-cents offer, expires July 15. I trust those who subscribe for a "trial trip" for their friends, will be able to secure them as regular subscribers, and thus earn some of the premiums offered in the Bee Journal for such work.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

May Be Foul Brood.

I want some information in regard to foul brood in bees. On May 6 I hived two swarms of bees for a neighbor living ¼ of a mile from me, and on Saturday, June 15, I was at his place removing some honey for him, and on examining the two swarms hived May 6, I found one of them in a condition I could not account for, they having built comb on but 5 frames, and them from half the length of the frame to sheets not larger than my hand, every cell being filled with brood or eggs, but the brood was all dead, the unsealed brood having a light brown appearance, and the cappings of the sealed brood was all sunken and full of small holes, from one to four holes in each, and the sealed brood had shrunken to not more than half the natural size of sealed brood, the heads being dark brown, and the bodies pale green. Now what I want to know is, what is the matter with them? and what can be done with them? Can it possibly be foul brood? I have never heard of foul brood in southern Illinois. W. E. W.

Benton, Ill., June 17.

ANSWER.—I'm afraid foul brood has something to do with the case, and I don't think this is the first that has been in southern Illinois. See if the dead brood is somewhat stringy, so that when you stick a toothpick in the cell and withdraw it the dead matter strings out. If there's only a single case I should promptly burn up the whole business—bees, combs and hive. If you want to study up the management of foul brood look over former numbers of the American Bee Journal, or perhaps, better still, send 25 cents to the Bee Journal office for Dr. Howard's pamphlet on foul brood.

Wants to Feed Grape-Juice to Bees.

Can I profitably use my second crop of Muscatee grapes by crushing the grape and feeding the grape-juice to the bees for comb honey? or by dipping the grapes first in lye, and rinsing after this process breaks the skin and hastens the drying process, and will cause the grapes to sugar early if immersed in the lye long enough? I expect to have six or eight tons of second-crop grapes to dispose of in this way, or feed them to the hogs. I prefer honey, any way, to pork, but doubtless the bees would leave the hogs all they needed. If this plan is practicable, I shall be glad of any suggested means whereby I may carry it out. A. R. G.

Merced, Calif.

ANSWER.—I shall have to leave this question for some one with experience in that direction. If I were obliged to guess, I should say you couldn't get good comb honey from grape-jnice, and I should be afraid it wouldn't be good for bees to winter on.

Swarming Interfered with by Cool Weather.

If bees are preparing to swarm, and have capped queen-cells, what will they do if a cold, rainy spell comes? Will they swarm when warm weather comes again, if that happens between the fruit-bloom and sweet clover, when little honey is coming in? G. S. S.

Norwood, Ohio, May 18.

ANSWER.—Nobody under the sun knows what they'll do. Most likely they'll give up swarming and destroy the cells, but sometimes when you feel pretty sure of that they'll go right ahead and do the opposite.

What Made them Swarm?—Clipping Queens.

1. This spring I had one colony of Italian bees. I divided them May 20, and sent for a queen the same day. I put the old queen with the new colony. I received the queen May 25, cut out all the queen-cells, and introduced her in a cage, and let her in with the bees May 28. In three or four days I had a swarm come from the old hive where I put the new queen. I had her wings clipped, and the swarm came back and went into the hive they came out of. I put the queen with them, and they have staid all right since. Now what do you think made them come out so quick after being divided?

2. Do you think the new queen is out of the cell at the time of swarming? If so, how long would it be before she would be mated and laying? When would be the proper time to clip her wings? W. N. D.

Danbury, Conn., June 10.

ANSWERS.—1. I don't know for sure, but I can make a guess. When you made the division, queen-cells were started, and you afterward cut out these queen-cells all but one that you missed. In 11 or 12 days from the time you made the division the queen was ready to come out of her cell, and the colony swarmed. When you returned the swarm the bees took it into their heads, for some reason, to retain the old queen, and the young one was destroyed.

2. At the time a prime swarm issues there is nothing more than sealed queen-cells left in the old hive, and the young queen may be laying in 10 or 15 days. But don't you go to clipping wings until you find eggs present, and know for sure the queen is all right.

Queens Getting Through Excluders.

I said in a whisper that queens were not always barred by excluders, and here's a man who thinks I needn't say it so softly:

DEAR DR. MILLER:—One can safely shout it from the house-tops, that young queens will go through queen-excluding zinc, with no danger of successful contradiction? I have lost eight swarms in the last 10 days, all passing through queen-traps. I took a swarm from a tree to-day, and hived them back through the trap, and found two queens with them.

Brookewood, Va., June 8. F. T. BROOKE.

Why the T Super is Preferred.

You claim you prefer the T super. We would like to know why. Do you think the bees will enter them quicker, or is the honey sweeter? I have not used them. I use the No. 2 dovetail 8-frame hive. C. H. A.

ANSWER.—No, the bees will not enter T supers quicker, nor is the honey in them any sweeter. But the sections will go into them quicker, and come out quicker, and the same super will take sections of a dozen different widths. They may not suit the bees any better, but they suit me for convenience in handling better than anything I ever tried. But I may yet find something better.

Planting Basswood Seed, Alsike Clover and Buckwheat.

1. When is the best time to plant basswood seed?

2. Is Alsike clover a valnable honey-plant? When is the best time to sow? Can black bees work as well on it as Italians?

3. How is the locust as a honey-producer?

4. When is the best time to sow buckwheat for bees?

New Hampton, Mo. M. T.

ANSWERS.—1. I don't know. I planted quite a lot one spring and not a seed grew. If I were to try it again, I'd plant in the fall, or about the time seed is falling off the trees. I suppose the self-sown seed is planted about that time?

2. Alsike is very valuable as a honey-plant. Blacks work on it as well as Italians. Sow the same time as other clover.

3. Good. Perhaps there isn't often a great deal stored from it, because it comes when so much honey is used for brood-rearing, but it's none the less valuable on that account.

4. Probably the same as farmers would consider the best time to raise a crop of grain. In latitude 42°, somewhere in the last half of June or the first part of July.

What Caused the Trouble?

To-day when I went in the apiary I saw plenty of bees fly like a swarm around one hive that never before gave any signs of swarming. On going near I saw that the bees came out of the hive, but they were going in like a swarm going back, having lost their queen. They were not robbing, and many stopped outside in a bunch. A few hours after, I went again, and saw plenty of bees dead in front of the hive. I opened it, and found it full of brood and bees. Two queen-cells were started, one queen-cell being open, but no eggs in

the combs. In the same hive, on one frame, in a thick bunch of bees, I saw a queen that looked to me to be old. She was fighting with the bees. In the bottom of the hive, too, many bees were dead or dying, and many others fighting. Do you think that the queen of one swarm, issuing without my knowledge, went into that hive? S. A.

ANSWER.—It would be hard to say with certainty. The appearance of the queen-cells would rather indicate that a swarm had issued a week previously, and other things seem to indicate that a swarm from some other colony had attempted to enter, the bees of the hive killing the intruders.

Drone Reared in a Queen-Cell.

DR. MILLER:—I send you a cage containing a sample of our Island-bred bees, and a drone that was reared in a queen-cell. You will find the queen-cell in a compartment of the cage. It was witnessed by some half-dozen interested persons, cut out of the comb and placed in the cage. He is due to hatch out Sunday afternoon or Monday. I hope he will arrive safely, and should be a yellow drone. Seeing that you interest yourself in such matters, you can make a note of this and satisfy yourself that drones do hatch out of queen-cells.

I hope you are having a good season. It is going to be a failure here, sure—neither clover nor basswood—everything killed with frost, and then a severe drouth. The only green things now to be seen is sweet clover, catnip and motherwort.

Toronto, Ont., June 15. JOHN MCARTHUR.

P. S.—Before mailing I looked to see how the bees were behaving, and find the drone hatched out, witnessed by several.

ANSWER.—The cage arrived with the handsome workers all in good health, but the drone, a nice yellow one, had succumbed. I think heretofore there has been no record of a drone issuing alive from a queen-cell, although it is not uncommon for bees to try to rear a queen from drone-brood when they have no other, such drone dying in the cell.

Queens Stopped Laying.

I have a colony of bees very strong, have filled one super with nice comb honey, and have six weeks yet to work. I thought to-day I would examine them, to see if they were making any preparation to swarm. I found very little sealed brood, the largest piece, in center comb, about four inches square. I found the queen all right—she is an Albino, purchased last summer. Is this as it should be? I expected to find frames full of brood. I examined a colony of blacks about the same strength, and they were in about the same condition. The longer I keep bees the more convinced I am that I know very little about them. F. T. B.

Brookewood, Va., June 14.

ANSWER.—I'd give a cooky to be in Virginia half an hour, even if you should ask me a lot of questions about things I don't know. Perhaps, though, I wouldn't know what ails your bees if I should see them. My first thought was, "You better pinch that queen's head off. She's no good." But when you say another strong colony is in the same condition, it hardly seems both would stop laying right in the middle of the harvest. Are there plenty of empty cells? or are the queens crowded out?

Reversing Brood-Frames to Prevent Swarming.

On page 451 of Gleanings, Mr. T. Bolton says that inverting the brood-chamber will prevent swarming for nine days when they are "swarmed." Will you please tell me why that is the case? I have had queen-cells built and capped over in three days, and I understand bees are apt to swarm as soon as a cell is capped over. Please answer in American Bee Journal. L. D. H.

ANSWER.—Some time ago there was much said in favor of reversing brood-chambers, one chief advantage claimed being that a queen-cell inverted would be destroyed, and thus swarming would be preveuted. Gradually, however, it seemed to be granted by all who tried it that the claim could not be upheld, and for some time nothing has been heard about it. Mr. Bolton's article sounds like some of the earlier ones, and it would not surprise me to hear later that he had given up the practice.

Your objection to the plan evidently lies in the fact that you think preparation and swarming can take place within the given nine days. I will not dispute that such might be the case, but it seems to me there must be a mistake somewhere when you say, "I have had queen-cells built and capped over in three days." In the present case that would mean that the cells were sealed over in three days from the time the egg was laid, for the matter in question has to do with cells regularly built for swarming, a queen being in the hive. In such case I think the young queen is started from the egg, and in three days the larva would be barely hatched out of the egg, needing at least five days of feeding.

Probably the case you have in mind is one in which, in the absence of a queen, cells were formed over larvæ well advanced; but Mr. Bolton's plan contemplates a queen in the hive.

The Spraying of Fruit-Trees.

I have many times read of spraying fruit-trees in the spring, but without knowing for what reason it is done. Can you tell me the reason, the manner, the time, and the effect of spraying fruit? J. M. E.

Belgium.

ANSWER.—The principal reason for spraying fruit-trees is to destroy the larvæ of the codlin moth. This moth lays an egg in the blossom end of an apple very soon after the blossom has dropped off; the egg hatches, and the little larva commences eating its way into the apple, becoming when mature very nearly in size and appearance like a wax-worm. Every one is familiar with the worm of wormy apples. It is plainly seen that any attempt at getting rid of the trouble before there is any trouble is useless, and it is also harmful to bees without good to the trees. But as soon as the larva is hatched from the egg, it is desirable to give it some poisonous food. Paris green or London purple is used shortly after the blossoms have fallen, using a pound of the poison to 200 gallons of water. It is thrown upon the trees in a fine spray by means of a spray pump. Ten days later a second application may be made, using this time 40 gallons more of water to the pound.

Can Bees Hear Bells Ring at Swarming-Time?

I have been reading the American Bee Journal for nearly 16 months, and am well pleased. I have read most of it the second time. Some claim bees don't hear. May 29 I had a swarm of bees come out and start to leave. I rang a small bell and finally settled them on a pear tree. I took them down twice, and tried to put them into a hive, but failed both times. Finally they started off again, and I settled them again, about 50 yards distant, and finally hived them. This has happened frequently with me. What effect has the bell? And if they do not hear, why did they settle? J. L. C.

ANSWER.—I think that most believe nowadays that bees hear. But perhaps most bee-keepers believe that the noise that bees hear has little or nothing to do with their settling, and that they would settle just the same if there was no noise. And they have an argument in the fact that when no noise of bells is made the bees often start and stop in the way you mention. But S. T. Pettit has lately asserted that for 15 years he has prevented swarms from leaving by ringing not a small bell, but by loudly ringing two good cow-bells.

A B C of Bee-Culture.—We have some of these books left, and in order to close them out quickly, we renew the low offer we made on them. This is the fine cyclopedia of bee-keeping by A. I. Root, containing 400 pages and nearly 200 engravings. The regular price is $1.25, but we will send the American Bee Journal one year and the "A B C" bound in cloth—both for only $1.80.

Honey as Food and Medicine.—A new and revised edition of this 32-page pamphlet is now issued. It has 5 blank pages on which to write or paste recipes taken from other sources. It is just what its name indicates, and should be liberally distributed among the people everywhere to create a demand for honey. It contains a number of recipes on the use of honey as food and as medicine, besides much other interesting and valuable information. Prices, postpaid, are: Single copy, 5 cts.; 10 copies 35 cts.; 50 for $1.50; 100 for $2.50. Better give them a trial. Send all orders to the Bee Journal office.

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OLDEST BEE-PAPER IN AMERICA

George W. York, - - Editor.

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Editorial Budget.

A Union of Two Organizations—the North American Bee-Keepers' Association and the National Bee-Keepers' Union—is suggested by Mr. Hutchinson in the June Review. Next week I hope to find room in these columns for Mr. H.'s editorial, and some pertinent comments thereon. The July Review will be specially devoted to a discussion of the subject.

Honey for Inflamed Eyes or Eyelids.—Dr. R. H. Bartlett, of this city, called on me last week, and in speaking of the many medicinal uses of honey, mentioned this one which he had used on his own eyes with satisfactory results: Grated carrot mixed with sufficient honey to form a paste. Apply as a poultice on the eyelids at night. Two or three applications usually suffice to effect a cure, though in chronic cases a longer treatment is necessary.

Honey-Vinegar—A Sour Item.—Hon. Eugene Secor, of Forest City, Iowa, has kindly sent in the following on making fine honey-vinegar:

We are now using in our family the finest vinegar we ever had. We have nearly a barrel of it. It was made from honey, but I am sorry I cannot give proportions. We have used scarcely any vinegar in the last ten years that was not made from honey. A vinegar-barrel is kept in the cellar, and when any honey-cans are washed the rinsings are put into the barrel. Occasionally a little inferior honey is used for that purpose, but we have never gone by any rule making or adding to the stock. We keep using out of the same barrel the year around, and, like the widow's cruse of oil, it has not failed. A little sweetened water goes in at the bung-hole, though, to replenish that drawn off at the spigot. I don't want any better vinegar than can thus be made from an otherwise waste product. EUGENE SECOR.

The California Honey Crop for 1895.—The following letter I received from Mr. Geo. W. Brodbeck, one of the best informed bee-keepers on the Pacific Coast, and who knows the true condition of things there. From it there will be seen to be no fear of a remarkably large crop of honey in California this year. It reads thus:

DEAR EDITOR:—At intervals I see notices in the various bee-papers, of the great and flowing streams of honey that California bee-keepers are being blessed with, and no doubt our Eastern brethren, as a result, are bracing themselves in anticipation of the time when this tidal wave of honey shall reach the Eastern market.

I, at this time, have reports from various sections of the principal honey-producing counties here, and the summing up is, that the honey crop of these counties will be less than one-fourth of the amount produced in 1893.

The first of the season was cool and foggy, and as a result half of the season passed by without any returns, and this, coupled with the previous winter's loss of fully one-half of the bees in this southern section, materially reduced the possibilities of securing a large crop.

We regret very much that some of our California bee-keepers permit their enthusiasm to control their better judgment, for, as in this instance, it rebounds to their own injury, and as a result the commission men are making use of these reports to contradict the actual state of the case, and thus take advantage of those forced to sell.

Los Angeles, Calif., June 18. GEO. W. BRODBECK.

Those "Cosmopolitan" Articles on bee-keeping, by Editor Hutchinson, have elicited considerable praise, and deservedly, too. Editor Root says this of them in Gleanings for June 15:

Bro. Hutchinson has reason to be proud of the two articles in the Cosmopolitan, especially over the very fine photos from which the engravings were made. The two articles are written for the *general* public, and I hope that some time they may be incorporated in book form for general distribution. One very pleasant thing about it is, that the treatment of the subject is fair and impartial. It does not boom any particular hive, but simply talks *standard* fixtures and *accepted* opinions, leaving all the latest ideas and theories out. Mr. Hutchinson deserves a vote of thanks from the bee-keeping world for the masterly way he has given the general public *correct* information. I think there will be less talk about manufactured honey because it has been shown that hundreds of tons of pure honey can be produced right from the hive—all of it gathered by the bee.

To all of which, everybody who has read the articles in the May and June Cosmopolitan, will heartily say, "Amen!"

Swarmed Upon the Organ.—An exchange says that a swarm of bees alighted upon a hand-organ from which an Italian was extracting alleged music near Huntington, Pa. The bees remained there until the bee-keeper came and put them back into a hive. No one was stung, and the organist declared that his music had charmed the bees, and made them harmless.

Illinois State Apiarian Experiments.—Mr. James A. Stone, Secretary of the Illinois State Bee-Keepers' Association, sent me the following letter, dated June 24:

DEAR BRO. YORK:—I inclose a letter from the Board of Directors of the Experimental Station at the University of Illinois, in answer to a memorial sent them, asking representation for bee-keepers in the same. If you will publish the letter, the bee-keepers of the State will know just how we stand. JAS. A. STONE, *Chairman Committee.*
Bradfordton, Ill.

The communication referred to in the above, reads thus:

URBANA, Ill., June 18, 1895.

Jas. A. Stone, Geo. F. Robbins, J. W. Finch, Jr.,
Committee of Illinois State Bee-Keepers' Association,
Bradfordton, Ill.

Gentlemen:—Your communication of March 13, 1895, on the part of the Association, was duly considered at the recent meeting of the Board of Direction of the Agricultural Experiment Station here. It was, however, decided that it was not feasible at the present time to take up the matters referred to in your communication for investigation or experiment. This does by no means indicate any want of appreciation of the importance of such work, but it is absolutely impossible for the Station to do all that would be desirable to have done, or to fill at the same time all the requirements of practical matters in the various lines of affairs coming under the general title of Agriculture. One factor in the decision is that the locality here is deemed a poor one for this work; while under present circumstances it is not deemed feasible to establish such experiments elsewhere.

The adverse decision concerning taking up in a prominent way special questions in apiculture does not include giving such attention to the matter as will be possible in connection

with the other work that is being carried on here. We shall be glad to be of any service whenever it is possible, and some time more attention may be given to your practical lines of investigation.

I am, however, glad to inform you that instruction in apiculture is offered in the University, to be taught by Mr. W. G. Johnson, who is a scientific entomologist, as well as a practical bee-keeper. Very truly yours,

T. J. BURRILL, *President Board of Direction.*

When we consider the enormous amounts of money expended in Illinois for all sorts of purposes—and many of them utterly useless—it seems too bad that the bee-keepers of the State cannot get the slightest recognition whatever. They pay the taxes like others who get some favors, but experimental apiculture isn't considered worthy of any notice or attention. Some other States are better informed on the subject, more fully comprehend the importance of bees to agriculture, and so have recognized the industry sufficiently to give it a prominent place at their experiment stations. Let us hope that Illinois may soon "catch on," and at least *keep up* with the procession even if she can't lead.

Mrs. O. O. Poppleton, of Florida, died recently, I noticed by Gleanings for June 15. Mr. Poppleton is well know to the older readers of the Bee Journal, as he was at one time a frequent contributor. Mr. H. W. Mitchell, of Hawk's Park, Fla., who sent the sad news to Gleanings, writes thus of the deceased:

Mrs. Poppleton was a native of Indiana, having been born in Maysville about 41 years ago. She will no doubt be remembered by a number of bee-keepers, having attended the national convention at Cincinnati in 1882, and Toronto in 1883, besides other State conventions. She was a well-posted and enthusiastic bee-keeper; and ever since her marriage to Friend Poppleton she has been his first assistant in the practical care of the apiary.

Mrs. Poppleton has been a consistent and prominent church member for 31 years, having joined the Methodist church when 10 years old. Cheerful, kind-hearted, and a lady in every sense of the word, to know her was to value her highly; and in her death, the community in which she lived sustains a heavy loss.

They did not have any idea her sickness would be fatal until three hours before she passed away. She was taken down with a complication of diseases, but the final cause of death was heart failure.

Bro. Poppleton will have the heartfelt sympathy of all in his bereavement.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

Putting on Sections—Doubling Up Colonies—Building Drone-Comb.

1. Does it pay to put on sections as late as the last of June in this territory? If the season is about over, apparently, what should I put in the upper story, if not new sections with foundation, when the full sections are removed?

2. I don't want any more increase, and would be glad to have advice as to the propriety of doubling up—and if desirable, when and how best to do it.

3. I tried putting swarms on frames with 3-inch starters, and many of them built drone-comb the balance of the way. Would you cut that out and put in worker-comb?

N. G. O., South Carolina.

ANSWERS.—1. Not with the expectation of getting them filled with the spring flow of honey; for by June 15 the spring harvest is over. I should put new sections in place of the removed ones, and allow them to remain until the fall flow.

2. I would double up the weakest colonies, and always save the best queens. Do this after the fall flow of honey. Make the union late in the evening; smoke the colonies to be united. Select the best combs and alternate them in the hive. Preserve the extra combs for use another season.

3. Full sheets of foundation are preferable to starters. Cut out the drone-comb and put in worker-comb.

Failing Queen.

DR. BROWN:—What is the matter with a leather-colored Italian queen in my apiary? The queen is one of an Ohio breeder's dollar queens, introduced in June, 1894, is quite prolific, and her bees have been good honey-gatherers. This spring I noticed that there were from two to four eggs in many cells. In a recent examination I find that very many cells are occupied by two eggs each. She has an abundance of room, having 40 frames in 4 hive-bodies, tiered up. The frames are 2 inches shorter than the standard Langstroth, depth the same as the Langstroth. This colony is very strong, and has built an exceptional number of queen-cells, which have been periodically removed. Is the queen failing, or can you assign a reason why she is so economical in cells?

"EASTERN KENTUCKY."

ANSWER.—The queen is failing, and from the fact of the bees constructing queen-cells, they are aware of the condition of things, and desire to supersede her. The extra eggs may slip into the cell from a slight paralysis of the sphincter muscle of the ovipositor.

Diseased Bees—Shipped Queens.

DR. BROWN:—1. What is the matter with my bees? One colony (old bees) have been dying for ten days, crawling out at the entrance constantly, and dying in front on the ground. I thought for some time it must be robbers getting themselves stung to death, but they continue dying, night as well as day. This morning I found the queen dead, or dying, in front of the entrance. I immediately proceeded to examine the combs one by one, and found 5 combs of eggs and brood in all stages. I found about one-fifth of the brood in the three center combs dead, most of which was sealed, or had been. The bees had uncapped most of the dead ones, and they seem dry and hard, some dry and moldy like "devil's dust;" others half dried up, having a white appearance. I inserted a broom-straw in the dead brood—no ropy substance adhered to the straw. Two other combs, one on each side of the three, contain some dead brood, though not one-fifth so much.

The bees are still a fair colony in numbers. I think I shall brimstone them to-night (for fear it is foul brood), and fasten the hive up tight, combs and all, and wait for you to tell me what's the trouble with them. What is the remedy, and what shall I do with the combs?

2. Do queens shipped from, say Ohio to Texas, do as well as queens shipped from points in the same latitude?

Hannibal, Tex. W. H. C.

ANSWERS.—1. Your bees seem to be peculiarly affected; and it is very difficult to give you advice without knowing more of the surrounding conditions, as to whether any other colonies in the apiary are similarly affected, etc. From your description of the disease, I hardly think it is foul brood—it is more like the effects of poisoned honey, and it might be well for you to make inquiry as to the use of any arsenical insecticides within range of your bees.

Foul brood is a terrible scourge to the bee-keeper. It is a disease to be dreaded, and it is best to give it no quarter. With the colony in question, if I thought it was foul brood, I should place the remaining bees on starvation diet for at least 36 hours, in a closed hive without combs, then put them into a new hive on clean combs with a fertile queen, and feed sugar syrup. The frames and combs in the foul hive *I would bury deep in the ground*, and after scraping the hive, washing it out with pearline, and giving it a coat of paint *inside and out*, I would use it.

2. Queens can be shipped to any point in the Union, and will do as well as if only shipped to points in the same latitude.

Some Tennessee Items.

In 1888 and 1890 I had fine crops of comb honey. My apiary was small then, however, and the aggregate was not large. Since then I've been increasing bees and decreasing revenue. When my dish was right side up the expected flow

failed to come, and hope for the future constrained me to continue improving my stock and waiting for the good time coming.

One year, following the directions in the books, I raised the supers when the sections were almost full of honey, and placed empty ones under. The season was near the close, and the sections were not finished. I had a fine lot of bait sections for the next year, and I've been baiting with them all along since then, occasionally getting some of them finished. This spring I had about 80 colonies to begin with. Swarming began early, the bees being in excellent condition from a good fall crop last year. There were a number of after-swarms, some quite small. I also reared some fine queens, and superseded less desirable stock with them. The black locust and apple bloom was abundant, and poplar promised much. But just as the latter came into bloom the cold weather came, and some of the recent swarms had to be fed. Then the weather became much better in time for buckthorn, honey-locust, etc. Now the linden is white with bloom. There is a large crop of honey in my supers to-day, most of it unsealed yet, and if the weather continues favorable, I hope for an abundant harvest.

SECOND-SWARMS PREVENTED.

It may be too soon to report it a success, but I'm going to risk telling how I've prevented second-swarms so far. You know a laying queen of this year's rearing is not inclined to swarm—in fact, it is the exception for her to swarm however populous her colony. Well, just as soon as a swarm is hived, I place it where the old colony stood, and give it the supers. The brood-chamber of the old colony is then placed on top of a hive having a young laying queen, and she attends to the queen-cells immediately.

I have given this treatment to 15 or 20, and "nary" a second swarm from them. The large quantity of sealed brood hatching out makes a populous colony before you are aware of it. You can then reduce it to a single-story hive by taking away such frames as have the least brood—taking from both upper or lower story—and add your supers in time for the latter part of the harvest. The frames taken away can be used to advantage in building up nuclei into good colonies, etc. Or another way is this: Some of my nuclei with laying queens were in half depth supers with shallow frames, and brood-rearing was only commencing. Put this on top of the old brood-chamber, and I find the queen generally descends pretty soon, leaving the shallow frames for honey almost exclusively.

SWARMING DISCOURAGED.

I find the suggestion some one made in some of the papers a year or two ago (rather indefinite, isn't it?)—that raising hives up considerably from the bottom-board discourages swarming—is excellent. And in this connection I am going to tell something else at the risk of making my article too long. I recently visited an old friend of mine on Cumberland Mountain, where he is surrounded by "the forest primeval," and bees revel in honey. He has large hives, made of 1½-inch and 2-inch lumber, frames above and below. He had then 36 colonies, all blacks, each hive named. They are arranged on a platform, well ventilated, with quite an extensive shed over them, so broad and roomy that he can work under it without stooping, and the sunshine enters only early in the morning and late of an evening. He tells me he has very little swarming. In four summers they have increased only from 18 to 36. He has a window to the upper story, and never cuts out any honey until the outside frame is sealed, and then only half the amount therein at any one time. He says they must have plenty for their own use. With this management he sometimes averages 50 pounds of comb honey. Does not this speak well for large hives, ventilation and shade?

Gainesboro, Tenn., June 14. LEWIS K. SMITH.

All About Georgia.—Any reader of this paper desiring information about the resources of Georgia, the Empire State of the South, by sending his name and address on a postal card to Hon. R. T. Nesbitt, Commissioner of Agriculture, Atlanta, Ga., will recieve free a handsomely-illustrated pamphlet, postage paid. Valuable to farmers and teachers.

☞ Never *shake* the bees off a frame having queen-cells on it. Nor in any way suddenly jar it; for queen-cells are much more liable to injury while on the frame than when taken from where they were built.—Doolittle.

Canadian Beedom.

A Consideration of Bee-Stings.

A sting in the neck which I got yesterday afternoon, and which makes me more stiff-necked than I am by nature, besides giving me considerable pain, suggests a topic for this article on which I can write feelingly. In the last edition of the Encyclopedia Britannica, article "Bee," by John Hunter, late Honorary Secretary of the British Bee-Keepers' Association, the following passage occurs on being stung by bees:

"Bee-keepers who meddle much with their bees soon become accustomed to stinging, and do not suffer much. Experiments have been made to ascertain the number of stings required to inoculate the blood, and it has been stated that about 30 at the rate of three or four a day, will suffice, after which the effect of the bee-poison is trivial. Persons unaccustomed to the poison, however, often suffer severely."

This reminds me of Mr. Gladstone's rule to chew beef 35 times in order to make it digest easily. There is beef that you may chew any number of times, and it will still be indigestible. So there are some people who never get used to a bee-sting. I am one of them. "Well," some one says, "if that is the case, why do you keep bees?" That is an impertinent question, which I am under no obligation to answer, unless by saying, "Mind your own business."

We have bee-keepers who are very fond of boasting that they can handle bees freely either without getting stung, or without suffering if they are stung. That is nothing to be proud of. They are pachydermatons, i. e., thick-skinned animals. As they did not make their own skins, they are not entitled to any credit for their being thick. But I have known cases in which such persons have suffered great inconvenience for want of protection. A bee-keeping friend and neighbor of mine in the long ago, Judge M., used to laugh at me for wearing a veil and gloves. He despised all such precautions and boasted that he could do anything among bees, with bare face and hands. One day he went out to look at his apiary just before going down to his law office after dinner. By some unlucky accident his foot slipped and he fell against a hive, knocking it over. Out came the bees with a rush, "in multiplied thousands" as he told me afterwards. Fortunately his apiary was in a grove of evergreens, that branched, as all evergreens ought to do, close down to the ground. He had the presence of mind to drop to the earth, and crawl under the friendly shelter of a large evergreen, where he was kept a close prisoner until nightfall. Every time he tried to get out the Philistines were upon him. The best he could do was to improve the time in thinking out some intricate law cases. But after that he had no more to say in ridicule of wearing veil and gloves.

I once heard Mr. D. A. Jones at a convention make fun of the idea of using any protection. He said no man should pretend to be a bee-keeper who could not handle bees bare-faced and bare-handed. Some time afterwards, I was visiting his apiary. It was not long after his return from the East, and he was showing me Italian and Holy Land colonies, opening the hives to let me see the queens. Naturally, I wanted to see the Cyprians also. Somewhat reluctantly, as I thought, he undertook to open a Cyprian colony. The first frame he drew out, the bees came at him like yellow devils. He stood his ground for a little, but soon set the frame down beside the hive and ran for dear life.

I notice that some of our best bee-keepers always wear at least a veil in the apiary. Mr. Heddon not only wears one himself, but provides them for visitors.

While on this subject, I will say that I have never yet found the ideal bee-veil. I thought I had when Mr. Hutchinson published that lovely picture of himself wearing one that ties with strings around the waist. But I soon found that the beauty lay in the bee-keeper more than the veil. The bees will crawl up my back and get inside the veil, no matter how tightly I tie the strings. A bee-dress, cool and airy, and absolutely impervious to bees is yet to be invented. I cannot resist the temptation of transcribing here some portions of a chapter on "The Bee-Dress," from an old bee-book by John Keys, my edition of which is dated 1814.

The veil is to be made of "thin boulting cloth," sewed to the brim of an old hat when reduced to two inches and a half in width. The cloth is to hang down a foot in breadth all round the head. "A broad tape is to be prepared, long enough to tie the cloth, *close* round the neck under the chin. But as the nose, chin and neck would be liable to be stung through the meshes, therefore, to secure those parts, some *oiled linen*

must be stitched opposite the face and neck, withinside, leaving two inches and a half free, opposite the eyes." What a comfortable head-dress! Tied with "a broad tape, *close* round the neck," what luxury it must be to wear it on a sweltering July day!

"Besides the hood, a thick pair of tanned-leather gloves will be necessary, or other leather oiled only *once;* a portion of old stockings to be sewed to the extremities, to draw tight over the cuffs of the coat. The legs must be defended by a thick pair of yarn stockings, drawn over those in common wear. The greatest care should be used in putting on the hood, that no hollows or chasms be left under the chin or about the neck; and for better security, it will be proper to tie a handkerchief over the gathering round the neck beside that of the tape. An apron before will be useful, to prevent these prying insects from tickling the belly. Thus appareled, defiance may be given to millions of bees or wasps, and all the operations may be executed without dread or danger."

I think I see Dr. Miller thus arrayed, clipping queens' wings with a delicate pair of scissors!

One more extract: "Women should not meddle with bees, without this bee-dress; nor then, without the addition of a man's coat, and, I had almost said, breeches also."

Among the Bee-Papers

Gleaned by Dr. Miller.

ADVANTAGES OF THE LONG HIVE.

It is more shallow, hence less liable to blow over. It takes narrower boards in construction, and consequently is less apt to season-crack. Combs are less liable to break down by high temperature. I have seen dozens of hives with American frames, where every comb in some cases would collapse at a high temperature, but never one with shallow combs. Combs being shallow, they are easier removed from the hive—you don't need one side of the hive knocked out. Combs being shallower than in square hives, the bees enter the supers more readily. We all know that bees will work above quicker if a one-tier super is used instead of a double-tier, and still a shallow hive with *two* tiers of sections is but very little taller than friend Boardman's; consequently it stands to reason that better results may be expected from a long, shallow hive than a square one which, in consequence, is taller.—J. R. Markley, in Gleanings.

THE ASPINWALL SUPER.

It is thus described by F. L. Thompson, in Gleanings: "Two sides, the rods connecting them, and the separators, are all there is of the super. The separators are turned to a right angle at the bottom, and have insets corresponding to those in the sections. The distinctive feature, which makes possible this simplicity, is the four round sticks which are used when the super is being filled, and afterward withdrawn. These pass through holes in the ends of the side-boards, and keep the sections to their proper place lengthwise until screwed up by the thumbscrews on the rods, while giving ample play for inserting the fourth section in each row. When the sections are all in, they can be temporarily wedged at the ends with a strip of the proper thickness, to keep them square until fastened. A flat board is then laid on top, to which a little pressure is applied, and the thumbscrews are tightened. On removing the board, sticks and wedge, the result is a homogeneous and smooth block of sections, which is conducive to cleanliness, as I can testify from having used another super in which the same result is achieved in a different manner."

TEN FRAMES VERSUS EIGHT FRAMES.

W. S. Hart says in Gleanings: "I made a lot of 8-frame Langstroth hives, but found they did not give room enough for brood-rearing in the spring, so I left the top sections (the same size as the bottom sections, but supplied with but seven frames) on the year round, and put on extra ones during the honey-flow. This arrangement curtailed the swarming impulse to some extent, but there was a good deal of unnecessary work to be done, and the second-story combs had about as much brood and pollen in them as those of the body of the hive. I would occasionally find brood in every frame, except the outside ones, and, sometimes, some even in them in both stories. This left me no clean, bright combs in the two-story hive for surplus honey, and no room for storing without a third story—a hand-to-mouth condition that I do not want in my apiary at any time. I concluded that there was little danger of getting hives too large, so I made 10-frame hives for the Langstroth frame, and with top sections on the year round, and used them side by side with the 8-frame hives for some years. Through what seemed to me indisputable proofs of their superiority, I was led to increase the number of the 10-frame hives, while the 8-frame hives have gradually found their way to the attic of my honey-house, where now all but one are nicely tiered up awaiting a purchaser in some one who prefers a small hive.

"The reason I did not adopt a 12-frame hive is that they are too heavy for one man to handle. When Mr. Olaf Olsen came to this country he asked my opinion as to the best size of hive, and I told him that, except for the awkwardness in handling, I preferred the 12-frame. He made a few of that size, to test my conclusions, and from them secured some astonishing yields."

WHICH WAY SHOULD HIVES FACE?

Question.—Should a hive face north or south? Would east or west be preferable to either?

Answer.—Nearly all bee-keepers agree that a hive should never face north of an east-and-west line, the majority favoring a southerly direction. The reason given for this is, that the morning sun entices the bees out to work earlier in the day, while a northern exposure keeps them in later, and in winter is almost sure to result in the loss of the colony in northern latitudes, from our rigorous north winds blowing in at the entrance, and the confinement of the bees, caused by the entrance being in the shade on mild, sunshiny days, when the bees in hives facing south fly freely. In southern latitudes it might not make much difference which way hives face; still, I have the impression that even in Florida and Texas the most of the hives are faced as above.—Doolittle, in Gleanings.

EARLY SWARMING AND SWARMING OUT.

Editor Root describes a condition of things that I suspect is not confined to Medina. At any rate, in this region bees seem to make preparation for swarming without any reasonable justification. He says: "Although there has been very little honey coming in, our bees have swarmed earlier than usual. They swarmed out, notwithstanding there is plenty of room for the queens, and for the bees to store honey. The only reason the apiarist and I can assign for this is the extremely hot weather that made the bees think other quarters might be more desirable."

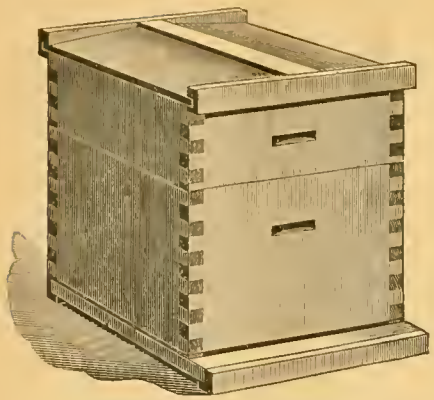
DO WE WANT THE APIS DORSATA?

In our previous issue appears a petition having in view the importation of the Apis dorsata, from India. The editor of the American Bee Journal does not seem to "tumble" to the idea, believiug that, if the government has any money to expend in that way, it would be better if applied in developing the known good races we have. Another writer thinks such bees could not be domesticated in a cold climate, and that they would not take kindly to hives, and they would not breed with our common kinds. He fears, furthermore, that, even if successfully introduced, they might increase so as to utterly run out the smaller bees, just as the miserable English sparrow has encroached so much on our useful birds—giving us in his own person nothing pretty, good to eat, nor pleasant to listen to. If my own enthusiasm for the Apis dorsata is not up to the boiling-point it is because I do not think it would pay for the trouble, even though they might not prove to be a nuisance.—Gleanings.

THE UNION OF THE BEE-KEEPERS' UNION AND THE NORTH AMERICAN.

The editor of Gleanings says: "I have long thought it would be a good idea to merge the Union and the North American into one society; and I am glad that Brother Hutchinson has set the ball a-rolling. Then the North American could offer substantial advantages for becoming members of the same. While it would have its annual meetings as before, the fraternal handshakes, etc., the members would be entitled to protection from unjust legislation, and perhaps from swindles of all kinds. I do not know that I am prepared to say just yet that such a merging of the two societies would be wise; but I think the matter should have the earnest and careful consideration of bee-keepers. It is a good time now to discuss it, preparatory to the meeting that is to be held in Toronto."

That New Song—"Queenie Jeanette"—which is being sung everywhere, we can send you for 40 cents, postpaid, or club it with the American Bee Journal for one year—both for only $1.10. Or, send us one new subscriber for a year (with $1.00), and we will mail you a copy of the song free.



—NOTICE—
To Bee - Keepers and Dealers.

I have one of the largest Factories in the West, devoted entirely to the manufacture of Bee-Keepers' Supplies.

Having made arrangements with the inventor to manufacture the "Higginsville Hive-Cover," I will place it on all hives sent out this year, unless otherwise ordered.

Write at once for large illustrated Catalogue for 1895, giving full description and prices of Higginsville Hive-Covers, Dovetailed Hives, Sections, Frames, Supers, Foundation, Crates, Boxes, Smokers, Extractors, etc.

Write for prices on large quantities.

E. L. Kincaid, Walker, Vernon Co., Mo.

Mention the American Bee Journal.

California

If you care to know of its Fruits, Flowers, Climate or Resources, send for a Sample Copy of California's Favorite Paper—

The Pacific Rural Press

The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.40 per annum. Sample Copy Free.

PACIFIC RURAL PRESS,

220 Market St., - SAN FRANCISCO, CAL.

BEGINNERS.

Beginners should have a copy of the Amateur Bee-Keeper, a 70-page book by Prof. J. W. Rouse. Price 25 cents; if sent by mail, 28c. The little book and the Progressive Bee-Keeper (a live, progressive 28-page monthly journal) one year, 65c. Address any first-class dealer, or

LEAHY MFG. CO., Higginsville, Mo.

APIARIAN SUPPLIES VERY CHEAP —"Amateur Bee-Keeper"—how to manage bees, etc.—25 cts. The "Model Coop." for hen and her brood Wyandotte, Langshan and Leghorn Eggs for hatching. Cat. free, but state what you want

J. W. ROUSE & CO., Mexico, Mo.

BIG DROPS

of water has made the vegetation. Now the sun shines—the Honey wells up—the Bees gather it, and every Bee-Keeper should have all needed **Supplies at once.** Catalogue Free.

Thos. G. Newman, 147 South Western Ave. **CHICAGO, ILL.**

ONE-PIECE SECTIONS---CHEAP!

In Order to Reduce Our Stock, We Offer

No. 1 CREAM SECTIONS — 4¼x4¼x7-to-ft.: 1¾, 1⅞, 1 15-16 and 2 inch:
1000 for $1.50. 5000 at $1.40 per M.
10,000 at $1.35 per M.

No. 1 WHITE SECTIONS — 5¼x6¼x2, open on two 5¼ sides:
1000 for $2.50. 5000 at $2.35 per M.
10,000 at $2.25 per M.

G. B. LEWIS COMPANY, Watertown, Wis.

A NEW DEPARTURE!

$.50 **F. A. LOCKHART & CO.** $.50

Have concluded to let every NEW CUSTOMER have one of those hardy, gentle, prolific Northern-bred Queens—untested, either **Gray Carniolans** or **Golden Italians,** for 50 cents. Don't fail to try our Carniolans. They are a wonderful race of Bees, superior to all others in many ways. We never saw foul brood or bee-paralysis. Untested Queen, 75c.; 6 for $4.

Descriptive Price-List Free.

F. A. LOCKHART & CO., LAKE GEORGE, N. Y.

27D2t ☞ Be sure to mention the American Bee Journal when you write.

SMOKERS : KNIVES

Send for Circulars and Prices, to

T. F. BINGHAM, ABRONIA, MICH.

23Atf Please mention the Bee Journal.

NUCLEUS Colonies, Italian Queens, Bee-Supplies. G. M. Whitford, Arlington, Neb

24A4t *Mention the American Bee Journal.*

PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook Montgomery Co., N. Y.

Mention the American Bee Journal.

General Items.

"Good Old Times" Here.

I am happy to say the "good old times" have come again. Oh, what a honey-flow! Every thing is full and running over, and basswood, sumac and sweet clover not out yet. It appears every flower has honey in it in great abundance this spring; and as yet very little swarming—in fact, I have not had a swarm in June. But my May swarms are working in the sections. Basswood and sumac promises exceedingly well. The limbs of the basswood trees are bending with the weight of the buds. The weather is favorable.

CHAUNCEY REYNOLDS.

Fremont, Ohio, June 21.

Spraying Blooming Fruit-Trees.

I came near losing all my bees, as my neighbors took to sprinkling the apple-trees when in full bloom. They say they have a right to spray their trees any time they like. They sprayed their trees when the bees were thick in them. But the next night came a hard freeze and killed every blossom—apple, plum, and cherry—so we shall have no fruit this year. If people are allowed to spray so, I may as well give up bees entirely, as it will be no good, for the bees cannot be shut up. If there is any way to stop neighbors from poisoning or spraying their trees when in full bloom, please let me know. GEO. HODGES.

Belmont, N. Y., June 4.

[While there is not the least excuse for spraying trees before the blossoms have fallen, it cannot be made compulsory until there is a law enacted on the subject. Better agitate for a State law, if it is too big a job to educate your neighbors by other means.—EDITOR.]

A Young Bee-Keeper's Letter.

Our bees wintered well, but this will be a poor year for them unless we get a good crop of fall honey, and that is doubtful. Nearly all the basswood blossoms fell off. Fruit-bloom did not amount to much. There is some white clover, but if it does not rain soon it will dry up. The bees get a little honey and pollen now and then; the honey comes from red raspberry bloom.

We moved 20 colonies of bees in May. We put the hayrack on the wagon, and put three or four forkfuls of hay on. Then we stacked the hives on it, the entrances facing the center; we did not close them, because it was so warm we thought the bees would smother. We hauled the 20 colonies in one load a distance of about three miles. When we got about a quarter of a mile on our way home, nearly all the hives were black with bees. When we reached home they were nearly all back in the hives again.

We have three kind of hives now; one holds eight frames, one nine, and the other ten. We like the nine-frame the best.

I do not think our bees will swarm much this year. We have had a dozen swarms so far. Our supers hold 28 sections, making seven rows of sections in each super. In

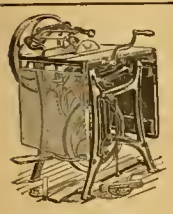
QUEENS !

Now ready by return mail, reared in full colonies from the best honey-gathering strains in America, at the following very low prices:

Tested .....each	$1.50
" per ½ dozen.....	8.00
Warranted purely-mated .....each	.75
" per ½ dozen.....	4.25
" per dozen	8.00

If you want **Queens for business,** get my old reliable strain. 40-p. descriptive Catalog Free. **W. W. CARY, Colrain, Mass.**

27Atf *Mention the American Bee Journal.*



ONE MAN WITH THE **UNION** COMBINATION SAW

can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing, Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery. Sold on Trial. Catalogue Free.

SENECA FALLS MFG. CO.,
46 Water St., SENECA FALLS, N. Y

27D12 *Mention the American Bee Journal.*

HONEY QUEENS!

Have been carefully bred for producing comb honey for the past 18 years, and by a special method for producing large, long-lived, prolific Queens. Can furnish either 3 or 5 Banded stock, bred in separate yards. 3-Banded bred from my own or Imported Mother. No foul brood or paralysis. Warranted Queens, purely mated, 60 cts.; Tested, $1.00; Selected Breeders, $2.50. Discount on quantities.

27Atf **J. H. GOOD, Nappanee, Ind.**

Mention the American Bee Journal.

The American. **STRAW HIVE** Latest and Best.

Perfectly adapted to Modern Bee Culture.

Illustrated Circular Free.

HAYCK BROS., QUINCY, ILL.

19A8 Please mention the Bee Journal.

Queens and Nuclei !

Untested Italian Queens, by return mail, 75c; Tested, $1.00; Select Tested, $1.50.

Nuclei, by express—per Frame, 75c.

Address. **C. E. MEAD,**
87 Artesian Ave., Station D. CHICAGO, ILL.

TAKE NOTICE!

BEFORE placing your orders for SUPPLIES, write for prices on 1-Piece Bass wood Sections, Bee-Hives, Shipping-Crates Frames, Foundation, Smokers, etc.

PAGE & LYON MFG. CO.
NEW LONDON, WIS.

Mention the American Bee Journal.

H. G. Acklin, 1024 Mississippi St **St. Paul, Minn.**
Northwestern Agent For
The A. I. Root Co.'s Apiarian Supplies
Send for Price-List } BEES AND QUEENS For Sale.

21A17 *Mention the American Bee Journal.*

Crimson Clover Seed ! !

Having more than I shall sow, I offer it for sale. It was grown on hard land, is acclimated fully. Clean, good seed and **Will Grow.** 2 bush., seven dollars ($7.00); 1 bush., $3.75; ½ bush., $2.00; ¼ bush., $1.25. No charge for bags.

J. COLBY SMITH,
26A8t WILLOW GROVE, DEL.

IMPORTED Italian Queens reared this yr., $3.50 each. Tested Queens—**Breeders**—$1.50 to $2.00 each.

21A **W. C. Frazier, Atlantic, Iowa.**

WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

the center row of each super we put pieces of comb for starters instead of the other foundation. The bees seem to start to work in the sections quicker with such baits.

We have a shade for all of our hives, made out of common pine-boards. They keep the hives and covers from warping, besides giving the bees a lot of shade.

Quite a lot of sumac grows around here, but it was frozen black this year. The leaves have all grown out full size again, and some of them have small buds, so I think they will bloom again.

Fruit will be quite scarce in this part of the country, as it was nearly all killed by the frost. Some places on high ground it was not damaged much.

The red raspberry blossoms seem to yield quite a bit of honey here. It blooms for such a long time. My bees have not swarmed yet this year, but they seem to be quite strong. CHAS. D. HANDEL.

Savanna, Ill., June 13.

Bee-Business in Hard Luck.

The bee-business seems to be in hard luck north of the 49th parallel. Unless rain comes in a few days, the crop of 1895 will be a very short one. One thing certain, there will be no basswood—the frost in May cooked it. I hope our brother bee-keepers across the line may be more fortunate. I have a few colonies that have considerable honey stored in the upper stories.

JOHN MCARTHUR.

Toronto, Ont., June 17.

No Clover Honey.

Not a drop of clover honey here. Clover was all killed by the drouth last year. We may get some basswood.

W. Z. HUTCHINSON.

Flint, Mich., June 22.

"Pears Self-Impotent."

This is the heading of an item in Rev. E. T. Abbott's "Notes and Comments" in the Bee Journal for May 30, in which he says that the bee-keepers of the country owe "Special Agent" Waite a vote of thanks for producing such a valuable addition to the literature of this important subject. If Mr. Abbott, or Mr. Waite, will come to this part of the country I will show them a Bartlett pear-tree with pears on it that stands fully half a mile from any other pear-tree that has ever bloomed. If Bartlett pollen is impotent, what fertilized that pear-tree? This tree is a living witness to the unreliability of all experiments that are made by covering fruit-bloom and attempting fertilization by artificial means.

Muscatine, Iowa. W. S. FULTZ.

Bees All Right Again.

Everything in regard to my bees is in first-class shape. The trouble mentioned on page 378, left the bees the Wednesday following the Sunday that they were taken so badly. Their flight was southwest in the time of their trouble, towards a large market garden. They changed Tuesday afternoon to southeast, and everything is all right. I have three large swarms, and one after-swarm. I had some trouble with my

Italian Queens

Warranted Purely Mated, 50 cts. each.
Tested, 75 cts., or 2 for $1.00; 12 for $5.00
Good Breeders, $2.00 each.

F. A. CROWELL,
24A5t GRANGER, Fillmore Co., MINN.

Mention the American Bee Journal.

Promptness Is What Counts!

Honey-Jars, Shipping-Cases, and everything that bee-keepers use. **Root's Goods at Root's Prices,** and the best shipping point in the country.

Dealer in Honey and Beeswax. Catalogue Free.

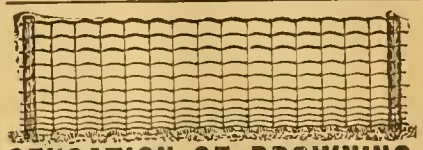
Walter S. Pouder
162 Mass. Ave. INDIANAPOLIS, IND.

Ready to Mail!

☞ Untested Italian Queens are now ready to mail. Price, $1.00 each; six for $5.00; twelve for $9.00.

T. R. CANADY,
23A5t FALLBROOK, CALIF.

Mention the American Bee Journal.



SENSATION OF DROWNING.

Some people contend that it's quite pleasant, but you will notice they keep up a vigorous kicking, and struggling to get out and will even "grasp at straws."

It is the same way with those who make or sell wire fence without **elasticity.** They try to appear happy but flop from one scheme to another. After being swept under by a big coiled spring wave, they come up spluttering "can swim as well as the Page." End springs and ratchets are the "straws" that deceive them.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention the American Bee Journal.

Queens Either 3 or 5 Banded, 75c. each; 6 for $4.25. Give me a trial. I can please you. Catalog free.

Chas. H. Thies,
24Atf STEELEVILLE, Randolph Co., ILL.

Mention the American Bee Journal

THROAT AND LUNG DISEASES, **DR. PEIRO,** Specialist Offices: 1019, 100 State St., CHICAGO. Hours 9 to 4.

Golden Italian Queens, 60 Cts.!

SPECIAL TERMS —— and —— CIRCULAR FREE.

J. F. Michael, Greenville, Ohio.

25A4t Please mention the Bee Journal.

GOLDEN QUEENS

From Texas. My Bees are bred **For Business,** as well as for **Beauty** and **Gentleness.**

☞ Safe arrival and reasonable satisfaction guaranteed. Write for Price-List.

Untested, 75c—Warranted, $1.

J. D. GIVENS, LISBON, Box 3 **TEX.**

10A26 *Mention the American Bee Journal.*

Binders for this size of the American Bee Journal we can furnish for 75 cents each, postpaid; or we will club it with the Bee Journal for a year—both for $1.60. We have a few of the old size (6x9) Binders left, that we will mail for only 40 cents each, to close them out.

Honey & Beeswax Market Quotations.

CHICAGO, Ill., June 7.—We have our usual dull season which we look forward to and expect. Honey is entirely forgotten during the months of June, July and August. The market is pretty well cleaned up of all grades of honey, so the prospects are encouraging for the coming season. We are getting 13@14c. for light comb. J. A. L.

KANSAS CITY, Mo., June 19.—Supply and demand is light. We quote: No. 1 white, 1-lbs., 13@14c.; No. 2 white, 12@13c.; No. 1 amber, 11@12c.; No. 2 amber, 8@10c. Extracted, white, 7c.; amber, 6c.; dark, 5c. Beeswax, 22c. C. C. C. & Co.

CINCINNATI, O., June 18.—Nothing new since our last. There is a fair demand for extracted honey at 4@7c. Comb honey is in slow demand at 12@14c. for best white.

Beeswax is in good demand at 25@31c. for good to choice yellow. C. F. M. & S.

CHICAGO, Ill., May 23.—The trade in comb honey is very light at this time of the year—as it is between seasons. Soon we will get the new crop, and it will come on a bare market. Just now what little comb sells brings 14c. for the best grades. Extracted, 5½@7c. All good grades of beeswax, 30c. R. A. B. & Co.

PHILADELPHIA, Pa., June 18.—The new crop of comb honey is arriving slowly, and is in fair demand. No new extracted honey has arrived in this market as yet. We quote: Comb honey, 9@13c. Extracted, 4½@6c.

Beeswax is still declining. The adulteration of beeswax has demoralized our market this spring, and has hurt our sales considerable. Price, 25@27c. W. A. S.

NEW YORK, N. Y., May 24.—White comb honey is well cleaned up. Considerable buckwheat remains on the market, and, as the season is about over, some of it will have to be carried over. Extracted is doing fairly well, with plenty of supply to meet the demand. New southern is arriving quite freely. We quote: Extracted, white, 6@6¼c.; amber, 5@5½c. Southern, common, 45@50c. per gallon; choice, 60@65c.

While beeswax holds firm at 31@32c., we think it has reached top market and do not expect it to go higher. H. B. & S.

MUTH'S HONEY EXTRACTOR PERFECTION Cold-Blast Smokers,

Square Glass Honey Jars, Etc.

For Circulars, apply to CHAS. F. MUTH & SON. Cor. Freeman & Central Aves., Cincinnati, O. Send **10c** for Practical Hints to Bee-Keepers.

Mention the American Bee Journal.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

J. A. LAMON, 43 South Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 120 & 122 West Broadway.
CHAS. ISRAEL & BROS., 486 Canal St.
I. J. STRINGHAM, 105 Park Place.

Kansas City, Mo.

C. C. CLEMOMS & Co., 423 Walnut St.

Buffalo, N. Y.

BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

Philadelphia, Pa.

WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

A Binder for holding a year's numbers of the BEE JOURNAL we mail for only 75 cents; or clubbed with the JOURNAL for $1.60.

first two swarms. I did not drive them down into the brood-frames. They went to the top of the hive and commenced to build comb Sunday before last. I smoked them down and got a hat full of honey and comb from each hive. In doing so I lost one of the queens, and the two swarms doubled up, and such a hive of bees I never saw—as much as I want to lift! They have one crate about full, and are working on the second, all in one week. I suppose the brood-frames are full by this time. I found the queen dead at the entrance of the hive she swarmed from. I will report, when I clean up this hive, in regard to the amount of honey I get from it.

EDWARD FLETCHER.

Portland, Me., June 10.

Cut Short by Frost.

People lost nearly all their bees last winter around here. I lost 14 out of 26 colonies. They got in lots of honey during fruit-bloom, but the late frost cut everything short on May 12, so we can't tell whether we will have much surplus or not.

E. J. FUSSELMAN.

North Jackson, Ohio, June 15.

Bees Starving—Dry Weather.

Bees here are in a starving condition. There is no honey on account of the drouth. One bee-keeper lost 26 colonies out of 45. Everything is suffering for want of rain, except corn. I am still feeding my bees to keep the young bees and brood from starving. C. C. CHAMBERLIN.

Romeo, Mich., June 14.

Honey-Dew Killed the Bees.

I had 20 colonies of bees last fall. This spring I had 2½ left (one being queenless). I then bought 10 pounds of bees, together with 10 queens; they are all doing well on last year's honey-dew. I had one large swarm June 13. After this, if my bees have nothing but honey-dew for winter stores, and I can't extract it, as was the case last fall, I shall drive them into other hives and feed sugar syrup.

FRED BIESEMEIER.

Sterling, Nebr., June 18.

Good Basswood Crop Expected.

The Bee Journal is a great help to me; I would not be without it as long as I have bees.

I have 28 colonies all in good condition, and I must thank the Bee Journal for it. White clover is poor here—only 5 or 6 acres within reach of my bees, and that is poor. It is just commencing to blossom now. Basswood looks good here, and we expect a good crop of honey from it.

MATH. ESSER.

St. Lawrence, Wis., June 14.

Won't Have Half a Crop.

I have 15 colonies of bees, and we will not have more than half a crop of honey this season on account of the loss of the orange-blossom crop by the freeze we had in February. H. A. WARD.

Winter Park, Fla., June 16.

No Sweet Clover for Kansas.

I discover that there exists quite a disposition to boom sweet clover. Better "watch a little out." Our people regard it as a *pernicious weed*. It is reported that a certain Kansas farmer sowed 40 acres, having purchased the seed for alfalfa, and the party who sold the seed only escaped a lawsuit by a sudden death. "Haec fabula ducet." If you don't want to die in a hurry, don't sell sweet clover seed, nor mixed sweet clover and alfalfa. It appears to be wonderfully hardy, grows along the irrigating ditches, thrives with irrigation, but also grows about as well on the upland where the subsoil is as dry as ashes, and probably has never been penetrated by rain water, or otherwise received a bit of moisture since this section was the ocean's bottom. Nothing will eat sweet clover, either green or when cut for hay, and we do not consider it valuable for its nectar. I have heard that stock eat it in Utah, but our cattle will sooner eat loco and yucca.

Syracuse, Kans. JAMES H. WING.

GOLDEN ITALIAN

QUEENS by return mail from a breeder obtained of Doolittle, which he selected and tested out of 1000, for his own special use; he said this Queen is a better one than the

WORLD'S FAIR QUEEN

which was valued at $50.00. Also

ITALIAN QUEENS

from one of A. I. Root's very best imported breeders. Price of Queens—Untested, 55c.; 6 for $3.00; 12 for $5.50. Tested, $1.00 each; 6 for $5.00. No disease. Shall run 400 nuclei. Ask for Free Circular, which may be worth dollars to you, if you buy Queens. Safe delivery and satisfaction will be guaranteed in each and every case. H. G. QUIRIN,
27D6t BELLEVUE, Huron Co., OHIO.

Convention Notices.

CALIFORNIA.—The next meeting of the Tulare County Bee-Keepers' Association will be held in Visalia, Aug. 14, 1895. All interested are invited. J. E. YOUNG, Sec.
Visalia, Calif.

TEXAS.—The Texas State Bee-Keepers' Association will meet at Greenville, Tex., Aug. 21 and 22, 1895. Good premiums are offered for best exhibits. All are invited to attend.
Deport, Tex. W. H. WHITE, Sec.

Wants or Exchanges.

This department is only for your "Wants" or bona-fide "Exchanges," and such will be inserted here **at 10 cents a line** for each time, when specially ordered into this department. Exchanges for cash or for price-lists, or notices offering articles for sale, will not be inserted here—such belong in the regular advertising columns, at regular rates.

TO EXCHANGE—Bees and Queens for an Organ. F. C. MORROW,
27Atf Wallaceburg, Ark.

TO EXCHANGE—Lossing's "Civil War in America" (3 vols.), for Honey. Address, J. C. YORK, Alliance, Ohio.

TO EXCHANGE—Buzz-Saw, Shipping-Cases, Lang. Section-Frames with tin separators, for Queens, Honey, or own offer.
22A4t G. M. DEER, Riga, Mich.

WANTED—Information regarding any locality in southern Georgia, Alabama or Florida, possessing good fall and early-spring honey-resources. Please address,
SOUTH FLORIDA APIARY CO.
27A2t New Smyrna, Fla.

—SPOT CASH—

FOR **High-Grade Honey**

Send Sample and Lowest Prices.

KASTLER AND IRVING,
237 Blue Island Ave.,
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Mention the American Bee Journal.

Globe Bee Veil

By Mail for One Dollar.

Five cross-bars are rivited in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through.

It is easily put together and folds compactly in a case, 1x6x7 inches, the whole weighing but 5 ounces. It can be worn over an ordinary hat; fits any head; does not obstruct the vision, and can be worn in bed without discomfort. It is a boon to any one whom flies bother, mosquitos bite, or bees sting.

☞ This Veil we club with the Bee Journal for one year—both for $1.75; or give free as a Premium for sending us 3 New Subscribers to the Bee Journal at $1.00 each.

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

THROAT AND LUNG DISEASES,
DR. PEIRO, Specialist
Offices: 1019, 100 State St.,
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Italian BEES & QUEENS

Ready in May. Queens, $1.00. Bees by the Pound, $1.00. Two-frame Nuclei, with Queen $2 50. One-frame, $2.00. Also, **Barred P. R. Eggs**, for setting, $1.00 per 15.

Mrs. A. A. SIMPSON, Box 48, Swarts, Pa.
15A13t Please mention the Bee Journal.

Woodcliff Queens.

I will send a Guaranteed 5-Banded Yellow Queen, bred from a Breeder selected from 1000 Queens (some producing over 400 lbs. of honey to the colony); or a 3-Banded Italian Leather-Colored Queen direct from a Breeder imported from Italy. Oct. '94—**at 75c.**, and a special low price for a quantity.

My secret is to sell an extra-large amount, which enables me to sell at low prices. Will run this spring 350 Nuclei—have 1 home and 4 out apiaries. No Queens superior to my Strain.

☞ Send for Descriptive Catalogue and Testimonials, to

WM. A. SELSER, WYNCOTE, PA.

COMB FOUNDATION.

Made by Improved Machinery.

Get Samples.

Here are prices by the pound—just compare.

	1 lb.	5 lbs.	10 lbs.	25 lbs.
Heavy or Medium Brood	42c.	40c.	39c.	38c.
Light "	44	42	41	40
Thin Surplus	50	47	46	45
Extra-Thin Sur.	55	52	51	50

☞ If wanted at those prices, send to

W. J. Finch, Jr., Springfield, Ill

WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

1895 SAVE MONEY 1895

If you want first-class ITALIAN QUEENS *FOR BUSINESS*, **Foundation** at Wholesale Prices. **Hives**, suited for the South, or **SUPPLIES**, send for Price-List—to

J. P. H. BROWN, AUGUSTA, —GA.—

10A13t *Mention the American Bee Journal.*

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

What About the 5-Banded Bees?

Query 979.—1. Have you tried the five banded bees?

2. If so, what do you think of them?—Mass.

E. France—1. No.

P. H. Elwood—1. No.

Jas. A. Stone—1. No.

C. H. Dibbern—1. No.

W. G. Larrabee—1. No.

Prof. A. J. Cook—1. No.

J. M. Hambaugh—1. No.

Rev. M. Mahin—1. I have not.

Eugene Secor—1. A little. 2. Judgment suspended.

W. R. Graham—1. I have. 2. I think they are as good as any, but no better.

G. M. Doolittle—1. Yes. 2. They are good, but are only thoroughbred Italians.

Mrs. L. Harrison—1. No. 2. I think that the extra bands were gotten up to sell.

R. L. Taylor—1. Yes. 2. I think they require further trial before adoption.

Mrs. J. N. Heater—1 and 2. Yes, and discarded them because they were so cross.

E. T. Abbott—1. Yes. 2. They are very pretty, but I do not want them only to *sell*.

Dr. J. P. H. Brown—1. I have bred them. 2. No better than any well-bred Italians.

Allen Pringle—1. No. I don't care much about the bands, if the bees are bouncers to work.

Dr. C. C. Miller—1. Not enough to be thoroughly acquainted with them, because of bad season.

Chas. Dadant & Son—1. Yes. 2. They are not so prolific, or so good honey-gatherers as the others.

Wm. M. Barnum—1. Not personally. 2. I believe utility is to a considerable extent sacrificed to the fancy.

H. D. Cutting—2. They are nice to look at, and nice to take to a Fair, especially if the judge doesn't know his business.

B. Taylor—1. Yes. 2. I am not impressed favorably with them. My own are extremely cross, and they have died badly in winter.

J. E. Pond—1. I am the first person who ever gave public notice that 5-banded bees could be produced from the Italians. 2. I think they are beauties, and may or may not excel as workers, etc., depending upon the same conditions that govern bee-rearing generally. Some prove first-class, and some the reverse.

G. W. Demaree—1. I am pretty well acquainted with the much-banded bees, and have had quite a number of colonies of them at different times, in the past 18 years. They are easily bred to *many bands*, by selection. 2. No bees have ever given me better crops of honey than did my finely-bred banded bees. But it is too much work to keep them from running back to fewer bands.

DO NOT ORDER UNTIL YOU HAVE WRITTEN US FOR PRICES ON

The "Boss" One-Piece Section

Also D. T. Hives, Shipping-Crates and Other Supplies.

We have completed a large addition to our Factory, which doubles our floor room; we are therefore in better shape than ever to fill orders on short notice. **Send for Price-List**

J. FORNCROOK,
WATERTOWN, Jeff. Co., WIS., Jan. 1st, 1894.

Orange-Blossom, Alfalfa or Sage

HONEY

For Sale Cheap.

15Dtf **C. W. Dayton, Florence, Calif.**

BERKSHIRE, Chester White, Jersey Red and Poland China PIGS. Jersey, Guernsey and Holstein Cattle. Thoroughbred Sheep. Fancy Poultry. Hunting and House Dogs. Catalogue.

S. W. SMITH, Cochranville, Chester Co., Penna.
13D26 *Mention the American Bee Journal.*

Write to Wm. H. Bright—

For prices on all Improved Bee-Fixtures—

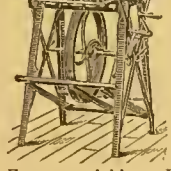
Hives, Sections, Comb Foundation, Brood-Frames, Extractors, etc.,

At Bottom Prices.

Golden Italian Queens $1.00 each. Free Price-List.

Wm. H. Bright, Mazeppa, Minn.
19Dtf Please mention the Bee Journal.

Barnes' Foot-Power Machinery.



Read what J. I. PARENT, of CHARLTON, N.Y., says—"We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of beehives, etc., to make and we expect to do it with this Saw. It will do all you say it will. Catalogue and Price-List Free. Address, W. F. & JOHN BARNES,
45Ctf No. 995 Ruby St., Rockford, Ill.

Mention the American Bee Journal.

The Adels—A New Strain of Bees

Friends, I shall be prepared to fill orders for **Adel** and **Italian Queens** June 1. Try them Warranted, $1; Tested, $1.50; Select Tes., $2.
23C **Joseph Erway, Havana, N. Y.**

Mention the American Bee Journal.

COMB FOUNDATION.

Wholesale and Retail.

Quality always the best. Price always lowest.

Working Wax into Foundation by the lb. **a Specialty.** I can make it an object for you in any quantity, but offer special inducements on straight 25 or 50 lb. lots. Or for making large lot of Wax into Foundation. I am furnishing large Dealers, and can also please you. **Beeswax taken at all times.** Write for Samples and Prices, to

GUS DITTMER, AUGUSTA, WIS.
Reference—Augusta Bank. 16Atf

WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

3-Frame Nucleus and Italian Queen —$2.50.—

Untested Queens, 75c.; Six for $3.50.
Discount on Quantities.

FULL—LINE—OF—SUPPLIES.

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105 Park Place. NEW YORK, N. Y

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SAVE MONEY ! !

It is always economy to buy the best, especially when the best cost no more than something not half so good. OUR FALCON SECTIONS are acknowledged to be superior to any on the market. The same is also true of our HIVES and BEE-KEEPERS' SUPPLIES, of which we make all modern styles. OUR PRICES will be found as low as those of any of our competitors, and in many cases lower, and you are always sure of getting first-class goods. We also publish THE AMERICAN BEE-KEEPER, a monthly magazine (Fifth year) at 50c. a year, invaluable to beginners. Large illustrated catalogue and price-list free. Address,

THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.

☞ **W. M. Gerrish,** of **East Nottingham, N. H.,** is our Eastern agent. New England customers may save freight by purchasing of him.

Mention the American Bee Journal.

Get Our High Prices on—

HONEY & BEESWAX

Before Selling.

C. H. HORRIE & CO.,
Commission Merchants,
224 South Water St., Chicago, Ill.
Reference—First National Bank. 24A13

Mention the American Bee Journal.

I ARISE

TO SAY to the readers of the BEE JOURNAL that

DOOLITTLE

has concluded to sell —BEES and QUEENS— in their season, during 1895, at the following prices :

One Colony of Italians on 9 Gallup frames, in light shipping-box	$7 00
Five Colonies.....	30 00
Ten Colonies.....	50 00
1 untested queen.	1 00
6 " queens	5 50
12 " "	10 00
1 tested Queen...	$1 50
3 " Queens.	4 00
1 select tested queen	2 00
3 " " Queens	5 00
Select tested queen, previous season's rearing .	4 00
Extra Selected for breeding, THE VERY BEST.,	6 00
About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.	

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☞ Circular free, giving full particulars regarding the Bees and each class of Queens.

Address

G. M. DOOLITTLE,

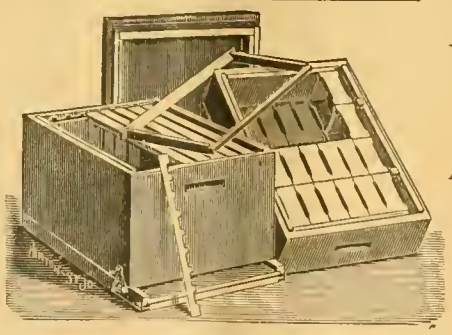
12A25t BORODINO, Onon. Co., N. Y.

Household Repairing Outfit.

This Outfit is a combination of the practical, tried and common-sense tools and materials that will enable anyone with enough ingenuity to drive a nail, to do his own half-soling, boot, shoe, rubber and harness repairing, right at home. No pegs required. Simple wire clinch nails. Saves time, trouble, expense and vexatious "shoe-maker's broken promises." Entire Outfit, neatly boxed, by express, only $2.00.

Or clubbed with the Bee Journal for 1 year—both for $2.60; or given as a Premium for sending us 6 New Subscribers to the Bee Journal at $1.00 each.

Abbott's Space.



That "St. Joe" Hive !

Write for a Circular
and Say How Many Hives
You Will Need.

Address,

Emerson T. Abbott,
ST. JOSEPH, MO.

Mention the American Bee Journal.

Hill Bee-Feeders.

We have a few of the Hill Bee-Feeders on hand, which we mail, prepaid, 2 for 40c. Or 12 by express for $1.50 —6 for 80c.

We will send 2 postpaid with the Bee Journal for a year, for $1.25, or give two Feeders as a Preminm tor sending us One New Subscriber to the Bee Journal, with $1.00.

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

Your Beeswax Exchanged

UNTIL FURTHER NOTICE, we will allow 30 cents per pound for Good Yellow Beeswax, delivered at our office—in **exchange** for Subscription to the BEE JOURNAL, for Books, or anything that we offer for sale in the BEE JOURNAL. In thus exchanging, we cannot afford to allow any Club Rate prices.

Always ship the Wax by Express, and prepay the charges; also put your name and address on the package to avoid mistakes.

GEORGE W. YORK & CO.,
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Seventeen Years Ago ✻✻✻✻✻✻ ✻✻✻✻✻✻ Dadant's Foundation

Was first offered for sale. The following parties keep it in stock and have kept it for years for sale. Why? Because they want to handle only the best goods, and they say they get the best goods when they buy Dadant's Foundation.

Thomas G. Newman, Chicago, Ills.
C. F. Muth & Son, Cincinnati, Ohio
Chas. H. Green, Waukesha, Wis.
Chas. Hertel, Freeburg, Ills.
E. Kretchmer, Red Oak, Iowa.
Jos. Nysewander, Des Moines, Iowa.
G. B. Lewis Co., Watertown, Wis.
James Reynolds Elevator Co., Poughkeepsie, N Y.
Page & Lyon, New London, Wis.
La. Bee-Keepers' Supply Co., Donaldsonville, La.
E. F. Quigley, Unionville, Mo.
G. K. Hubbard, Fort Wayne, Ind.
L. Hanssen, Davenport, Iowa.
C. Theilmann, Theilmanton, Minn.
E. C. Eaglesfield, Berlin, Wis.
Walter S. Pouder, Indianapolis, Ind
E. T. Abbott, St. Joseph, Mo.
J. M. Jenkins, Wetumpka, Alabama
John Rey, East Saginaw, Mich.
J. W. Bittenbender, Knoxville, Iowa.
Vickery Bros., Evansville, Ind.
Mrs. Jennie Atchley, Beeville, Texas.

Is not such a steady trade a proof of real merit in the goods we sell ?
We also make a specialty of **Veils and Veil Stuffs** of best quality.

Beeswax Wanted at All Times.

Bee-keepers' Supplies, Smokers, Sections, Tin Pails, etc. **Samples of Foundation and Tulle FREE** with circular. Instructions to beginners with circular. Send us your address.

CHAS. DADANT & SON,
Mention the American Bee Journal. **HAMILTON, Hancock Co., ILL.**

You may be able to get Supplies at

CUT PRICES !

But how does the workmanship compare with ours at

LIVING PRICES

We are receiving daily, unsolicited, testimonials like this :

THE A. I. ROOT CO.:—The Dovetailed hives ordered of you some time ago arrived from the railroad to-day, and this evening I put one of the bodies together, and must say it was just fun. Those dove tailed pieces were "yoost der fit." In fact, every thing seems to me so far to be better than the catalog promised or than I expected. I thank you for your promptness with which you filled the order, and especially for the quality of the goods you sent. I will say they are far ahead, as regards lumber in hives and frames than any I ever saw before, and I have seen a number ordered of other dealers, at lower prices; but for quality of lumber in both hives and frames, and for workanship, I have seen nothing to compare with those you sent me. S. L. PAYNE. Westfall, Oreg., May 5.

This explains our great flood of orders. **36-page Catalog free.**

Mention the American Bee Journal. **The A. I. ROOT CO., Medina, O.**

PUBLISHED EVERY WEEK AT $1.00 PER ANNUM.

ESTABLISHED IN 1861

AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS

35th Year. CHICAGO, ILL., JULY 11, 1895. No. 28.

Contributed Articles.

On Important Apiarian Subjects.

Hiving Swarms—More "Talking Back."

BY F. L. THOMPSON.

Replying to Mr. Abbott's request on page 361, I will give just what Dr. Dubini says. After quoting a passage from Sartori and Rauschenfel's "Apiculture in Italy," in which they say that surplus is usually not to be looked for from either the old colony or the swarm by the ordinary proceeding, Dr. Dubini says:

"This is the consequence of hiving the swarm on a vacant stand in the apiary, instead of reserving for it the stand of the old colony, and carrying the latter to the stand of a strong colony which threatens to swarm." (One reason, then, is to prevent swarming in the other colonies.) "The writers did well to observe that in the practice alluded to, which is almost universally followed, the swarm, with its quickly exhausted workers, becomes deficient in young bees, and the old colony finds itself despoiled of the honey-gatherers which went out with the swarm. On the other hand, who does not see how a swarm that is set on the stand of its parent colony enriches itself with the old bees of the latter, and that the old colony then gets all the honey-gatherers of the strong colony which has yielded place to it? The activity of the swarm, on the stand of the old colony, reinforced by the old bees of the latter, will be such that in a short time it will be necessary to give more room for surplus, so that if the old colony already had a super on, this is to be placed over the swarm. Thus it is the swarm which will give us surplus, and the old colony will not yield more than a moderate harvest, but at any rate it will produce enough for safe wintering, if, indeed, it does not send out a (second) swarm." (Here he uses a word which is too much for my dictionary, but he doubtless refers to a second swarm.)

"This method of placing the swarm on the stand of the old colony is indicated by the above-mentioned experienced apiarists, not for natural swarms, but assuredly for artificial swarms only."

I must plead guilty to not having noticed the import of that last sentence when writing my original note. It is the only place in the article in which artificial swarms are referred to; and near the beginning he says: "Now it is expedient to know from what colony the swarm issued," and goes on to tell how that may be known without opening the hives. The presumption is, that he himself is talking about natural swarms. What to make out of the last sentence I don't know.

As Dr. Dubini is a reader of the American Bee Journal, he may perhaps in the future comment on Mr. Abbott's remarks.

OVERSTOCKING.—On page 370, Mr. S. M. Carlzen tells of 1,500 colonies being kept within a circle having a diameter of four or five miles. I am somewhat, though imperfectly, acquainted with his locality, and am inclined to think that he must mean radius instead of diameter; also, that even in that case, 1,500 is a round number, from which perhaps several hundreds could be knocked off without impairing its accuracy. As long as overstocking is a fact, it does not matter how many or how few colonies bring it about, in warning others off from that locality. If the number given is a mistake, it would be well to have it corrected, for otherwise those who claim that it is hard to overstock a locality will be quoting the figure to show what a large number can actually be kept on a limited range without starving. On the other hand, if the figures are accurate, the statement is interesting enough to warrant a repetition. Overstocking is something of which little is known, and reliable data are greatly wanted.

I would like to give notice here to all foreign readers of the American Bee Journal, that if they can give us Americans any light on the subject of overstocking, the favor would be greatly appreciated. Their carefully-prepared statistics of apiculture would seem to indicate that they are in a position to make an authoritative statement on the subject.

"WHAT DR. MILLER THINKS."—Glad to see Dr, Miller poking up the animals again. Let the good work go on. He pretends he doesn't want to be talked back to, but back numbers of the Review show that he raised his voice like a pelican in the wilderness whenever he felt like it, and he can't blame us if we do likewise.

UNQUEENING COLONIES.—Dr. Miller hits me in the right spot on page 326. That shows one advantage of talking back. Writers are apt to forget and leave too much to be understood by their readers. When this happens, they should be pulled up and made to tell all about it. For instance, I never clearly understood J. A. Golden's feeder, described on page 213, until I saw it lately in Gleanings; he depended too much on the illustration which wasn't there.

No wonder a beginner like the Doctor was mystified at the fine distinction which appeared to be drawn between "a frame of bees" and "a frame full of shaken bees," but I think my copy would show a hyphen between the second "frame" and "full," making "frame-full"—that is, two frames are actually given to each nucleus, then the bees shaken from another frame and added to the bees on the two frames, then that frame replaced where it was taken from.

I wish to say right here, though, that in spite of my "interest" I would be only too glad to have some one arise and prove all that work is unnecessary from a money point of

view. I like to work with bees, but I can get just as much pleasure out of 10 colonies as 100, and I want to know how to work the other 90 and get the most honey with the least expense of labor and capital.

"One touch of nature makes the whole world kin." Mr. Bevins recently said that apiculture is one prolonged, never-ending interrogation point. In the May Apicoltore, the bee-journal of Italy, this remark is quoted, as one of the choice "straws" gleaned from bee-papers of other lands.

THE PUZZLED "GLEANER."—The joke is on me (page 381). I thought Gleaner meant an eighth larger than the common or Langstroth size, and was referring to Dadant and his followers, whose frames, roughly speaking, would be about a fourth larger than the Langstroth, if of the Langstroth length. I don't see now how I came to think so. I am much obliged to Gleaner for the correction. Arvada, Colo.

Length of Life of the Honey-Bee.

BY DR. E. GALLUP.

Now let us try to get at the facts about the length of life of the honey-bee. (See page 328, an article by H. P. Willson.) Take a black colony and introduce an Italian queen in the height of the honey-flow or working season. In 21 days from date of introducing, the blacks are all hatched out, and in 30 days from that date we have an Italian colony, and frequently scarcely a black bee left. From frequent experiments we have demonstrated that the life of a working bee in the working season does not exceed from 50 to 60 days, and yet in their wintering condition they frequently live 8 months, as I positively know. Now you can see the importance of having a good and prolific queen during the working season in order to keep up the strength of the colony.

Friend Willson says that he has no doubt that many of the bees now in the hives were matured last August. Now if they were matured in August, and September was a good working month, there would be but a very small percentage alive on April 24, if any. They lie comparatively dormant, and their age does not advance until they commence work in the spring.

There are many curious facts in nature. I will give one here. A young girl had her right foot and limb paralyzed at the age of 10. The limb was dead, withered and cold, and 6 inches shorter than the other. I started the life or magnetic current, which was cut off at the hip-joint. After she had obtained her growth and size, the dead or paralyzed limb kept on growing for five years, until it became the same size and length of the other. The age of the dead limb was only 10 years when the other was 15. Animation was entirely suspended for 5 years. I have had plenty of other demonstrations of the same kind.

Now we can see by the above facts that the age of the bees do not advance while they are comparatively dormant in winter; but we must have a good queen in the spring, or the colony dwindles away to nothing in short order, soon after their out-door labor commences. Now, providing we introduce an Italian queen late in the fall to a black colony, we will discover the blacks in full strength in the spring; but we soon have an Italian colony, and not a black bee left.

Santa Ana, Calif., May 27.

A French Bee-Keepers' Union.

BY CHARLES NORMAN.

Like us on this side of the Great Pool, who have our North American Bee-Keepers' Association, so there exists a similar institution in France, with its seat at Paris. Its history is this:

In 1856 an intelligent and progressive French bee-keeper, Mr. Hamet, encouraged by the Marquis d'Hautpoul, a member, and at the same time referendary of the French Senate, held a course of apiculture at that well-known public Paris garden, the "Garden du Luxembourg." This course having been quite a success, the government had an apiary erected there, and Mr. Hamet founded "La Societe Economique d'Apiculture" (The Economical Society of Apiculture.) Similar courses have since been held there, year after year, from the first of April until the first of June, and the participation of the would-be bee-keepers in them has always been a right satisfactory one. The society also holds exhibitions there, twice a year. In 1859 the first bee-keepers' congress took place there. In 1875 the society changed its name, and as many distinguished entomologists had become members of it, the study of insects was added to the one of apiculture; the title of the society now is, "La Societe Centrale d'Apiculture et d'Insectologie." (The Central Society of Apiculture and Insectology.)

In 1877 the government conceded to the society a space of 2,540 square meters in the park of Montsouris, for the establishment of a school of apiculture and agricultural insectology. The society has not been able yet to have a proper edifice erected there, but an apiary has been established where, like at the Luxembourg Garden, apicultural courses and conferences are held. The area conceded to the society has been utilized for the cultivation and study of melliferous plants, as well as of mulberries, with a view to finding out the best way or ways of rearing silk-worms. The government has also otherwise assisted the society—in 1894 it allowed them a subsidy of 1,500 francs.

There is, outside of Paris, a considerable number of provincial or local bee-keepers' unions in France; since 1891 many of them have affiliated with the Societe Centrale, and "apiculture has entered into a new era of prosperity since that epoch."

The society possesses quite a library, which is continually increasing by donations, exchanges, purchases of books, etc. They also have an album which contains the photographs of many of the members, as well as of other prominent persons. Since the two apiaries of the society have been established, never a complaint has been preferred against their bees—on the contrary, they always have been an additional attraction for the visitors of those public gardens.

The society consists of three kinds of members: honorary members—persons who by their scientific performances or their prominent position can render useful services to the society (among them I notice the name of a Chinese General, Tching-ki-Tong); foundator members—those who contribute to the society at least 100 francs in one sum: active members—those that join the society and pay 10 francs a year. Any person, without distinction of residence or nationality, can become a member. The council of administration is composed of a president, an honorary president, three vice-presidents, seven members, and two honorary members, a general secretary, three secretaries of the sessions, a treasurer and deputy, a librarian-archivary and deputy.

Anything that pertains to apiculture or insectology is an object to the society. For instance, new inventions (regarding hives, tools, insecticides, etc.) are produced and discussed. Has a person made, or rather (what is more often the case) does a person imagine having made an invention? A description of the thing (in a sealed envelope, if preferred) can, for a future proof of its priority, be handed to the society to be deposited in their archives. Recompenses can be accorded "to persons who make known interesting works, new instruments, essays on useful or injurious insects, and who indicate the means of destroying the latter." A Mr. Decaux is so anxious of acquiring prominency that he does not, like

other mortals, wait to see whether or not the society will take due notice of his extraordinary merits, but he writes a letter to them *requesting* a "medal" for his researches on the propagation of parasites.

Have interesting new books, pamphlets, or essays appeared? They are discussed, and the public attention is drawn to them. Queries, either from unions or single persons, are answered. Asks any bee-keepers' union for an instructor? A teacher is sent to them. The society sees that their exhibitions are well arranged and conducted. Whenever the legislative powers have laws under consideration which concern the interests of apiculture or insectology, the society exerts all its influence that the latter be guarded.

The organ of the society is "L'Apiculteur" (The Apiculturist); a monthly, edited and published at Paris, and being, like the society itself, in its 39th year now. Its present very able editor is Mr. Levalle, who, besides possessing a most thorough knowledge of modern bee-keeping, is an enthusiastic teacher and promoter of practical apiculture. The minutes of the society are published in the paper, which at the same time contains interesting articles, discussions, correspondences, market reports, etc. There are also not a few advertisements in it. St. Petersburg, Fla.

Form and Size of Brood-Chamber.

BY F. A. SNELL.

The hive I prefer contains 10 brood-frames 11¾ inches square, inside measure; top-bars tight-fitting except two openings 2½x3 5/16 inches for admission to the surplus department. The bottom part of the frames are held in position by spacing-nails. Width of space between the side-bars I prefer 5/16 inch; bottom-board movable. With this style of frame burr and brace combs are reduced to a minimum. With this form of brood-frame I have secured better results in wintering and springing bees than with any shallow frame I have tried, and they have been numerous and thoroughly tested. Each bee-keeper has his preference, and I simply give my reasons for my selection.

I have tried large and small brood-chambers with shallow frames, and others with frames 15 inches deep in the clear, and for wintering I have found nothing superior to these, and have secured large yields of surplus for this locality, from 8 and 9 frame hives of this depth, and 11¾ inches in the clear horizontally. Such frames are not as readily handled as one not so deep; hence I use mostly the 11¾x11¾. The combs are securely attached to the frames, the cluster of bees in the best possible position to economize heat, and the honey or stores near at hand, the form being compact.

During winter the bees cluster below quite a portion of the stores, thereby keeping the honey warm, and of easy access; the most compact form and normal cluster can be maintained. The colony is not forced to seek food at one end of the hive, as with the long, shallow brood-frame; and perchance the stores at that point become exhausted in extremely cold weather, the bees cannot move to the opposite end of the frames to secure food, and as a result, must perish. My loss in wintering in this form of hive has been but slight; spring dwindling, swarming out, etc., I know scarcely anything about by experience. I do not remember that I have had any of the latter for the past 25 years or more.

The form of the hive is such that the bees enter all parts of the super and begin work at about the same time, securing nearly uniform progress and completion. I practice tiering up. In running for comb honey I have no use for honey-boards, as the queen never enters the supers. Scarcely any burr-combs to mention. The bees enter the sections readily during a honey-flow. In fact, I fail by experience to see any difference between this style of frame and those 8½ inches in depth, in this respect, as it might seem to some, as the space is not large through the openings in the top-bars, which could be readily enlarged if desired.

This form of the hive makes it much easier to carry or remove to and from winter quarters. With the long hives in use two men have had to carry a hive, while these are carried by one with us. The brood-chamber being large, the spring must be a hard one, even with the extensive brood-rearing carried on in this form of hive, if the bees run short of stores.

The above are some of my reasons for preferring this hive, which will suffice at present. Milledgeville, Ill.

Comments and Suggestions.

BY EDWIN BEVINS.

STRAWBERRIES AND BEES.—Somebody was making a clamor not long ago in the American Bee Journal for some "facts" about bees and strawberries. The fact is I am short about 12 strawberry short-cakes because my bees failed to pollenize the blossoms of a row of Cresent strawberry plants I had right in front of the hives, and not more than 10 feet distant. These plants had staminate sorts on both sides of them, which gave me considerable fruit, but not a Crescent did I get.

DOOLITTLE'S "OLD MAN."—I have just given the mouth of Doolittle's "old man" a re-examination to see if I could find that "droop" which Dr. Miller says is there. Is it ever said of anything that it droops in the middle? Are the horns of the new moon said to droop when they are turned upward? I will leave it to you, Mr. Editor, or any other more careful observer than Dr. Miller, to say if the corners of the old man's mouth are not higher than the middle. If you want to see expectancy, Doctor, look at the old man's eyes!

SPACING WIRES.—To my new hive, 20 inches long, 12 inches deep, and 8-frame width, I have adopted the spacing wire used in the big Dadant extracting-hive. I use two of these wires in the bottom of the hive—one at each end of the frames—and hold the frames at the top with a small wire nail wholly or partly driven according to length of nail used. This hive any bee-keeper can make at home at very little expense, and with such tools as every bee-keeper is supposed to have. With these wire spacers, frames that are sawed out with a handsaw are just as good as any. And now having marked out a brood-chamber for comb honey that suits me in all its dimensions, I expect to soon say good-by to the standard. For extracted honey I will continue to use the Dadant hive, as with them swarming is almost unknown, and wintering has no terrors.

AT TORONTO.—I have just had another prophetic vision of some more of the things that may be seen at the meeting in Toronto in September. I see the Rev. Emerson T. Abbott there raising h—— about "raising" honey.

WHITE CLOVER puts in no appearance here this season, and I am bracing myself to buy more sugar for the bees, and eat more sorghum molasses on my pancakes.

KILLING BEES.—I read the reply of Mr. McArthur to my article, "Against Certain Bee-Killing Ideas," with some satisfaction and some surprise—satisfaction at the moderate tone of his reply after I had called him by the hard name of murderer; surprise that he still persists in advocating a practice in bee-keeping which provokes, if it does not justify, such a designation.

In calling him by this name I only adopted the language used by Langstroth towards all sulphurers of bees, whether

the number of colonies so treated be one or many. If I am not mistaken, Mr. Charles Dadant speaks of the practice by the bee-keepers of his native France, as if it were something he would be glad to have them abandon.

I am not prepared, and have no disposition to dispute Mr. McArthur's claim for the superior profitableness of his plan of migratory bee-keeping over the one suggested by me. Whether profitable or unprofitable, it was a plan I had no intention of pursuing. I suggested a different plan because I believed it might be made profitable, and I knew it to be more humane. There are some things which are not considered any violation of any law, either human or divine, which some folks do not care to do for profit. There may be profit in skinning skunks and muskrats, but some other man is more than welcome to the profits if he will only do the skinning.

Mr. McArthur seems to regard my contention that there is a distinction between killing the bees and killing a calf, as something not worth taking into consideration. I am willing to concede that, while there is a distinction, there is not enough difference to pay for quarreling about.

Yes, Mr. McArthur, I eat things killed, but participate as little as possible in the killing. The trade of butcher is an honest and necessary one, but somehow I cannot help thinking that the world is to be congratulated that the number of butchers need not be great.

If anything I have said in this connection seems to be more caustic than kindly, it comes from the feeling I have that the practice Mr. McArthur advocates would not be wholesome in its influence on bee-keepers. It seems to me to be a step in apiculture both downward and backward—a step which the bee-keepers of America cannot afford to take. If Mr. McArthur has not already entered upon the sulphuring practice, I will still indulge the hope that he may never do so. But whatever he and others may conclude to do, for myself I will continue to live with my bees as I do with my cat, my dog, and my horse—without any thought of the sulphur pit for the one, or of the shambles for the others. Leon, Iowa.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Strawberries Again—A Reply.—It seems to me that Mr. Secor has engaged in a great deal of special pleading, trying to make his point. I have not labored, as he suggests, at any time "to break the force of the arguments" which he has offered to prove that bees never work on the strawberry blossoms; for, to be frank, I do not think he has offered any "arguments" to prove his position. We had nothing but his dictum to prove anything, and so far as that goes, my dictum and observation are just as good as his. I have not made any "specious" statements, as I understand things, and so far as Mr. Secor's insinuations as to my ignorance are concerned, I am not in the least troubled about that. *Argumentum ad hominem* might do in politics, but it seems to me a little out of place in this case. This is not a question of "out-talking Missouri farmers," but if it were, I might be permitted to remark that "Missouri farmers" are probably about as intelligent as Iowa horticulturists, and are about as competent to weigh arguments. We have some people in this country who are "men of trained habits of observation," and they know enough to understand that the mere dictum of four men will not be taken as the final argument among sixty millions of people.

I went over to the market, which is in front of my office, and found a score or more of intelligent Germans with crates of strawberries in their wagons, all of whom were strangers to me, and every one of them to whom I put the question, "Do bees work on the strawberry bloom?" answered, "Yes." One of them, who had unusually fine berries, said, "Yes; if they had not, I would not have had any berries this year." It is true these men are "Missouri farmers," but they know a bee when they see it, if it is not too far off.

Mr. Secor closes his article with a very amusing declaration, which may cause as many smiles on the part of the intelligent botanists of this country as he imagines gathering on the physiognomies of the Iowa horticulturists when his perversion of my statements was put before them. No intelligent botanist would take his "olfactories," or any one else's, for that matter, as a final argument that a plant did not produce nectar. As to the rest of his article, and the real question in discussion, I submit the following in evidence:

MR. JACOB FAITH, Montevallo, Mo.

My Dear Sir:—I hope you will excuse me for bothering you, but it will be a great favor if you will answer briefly the questions which you will find below. Thanking you in advance, I am, Yours truly,

EMERSON T. ABBOTT.

Question.—1. Have you ever seen the honey-bee working on the strawberry blossoms? Answer.—Yes; and strawberries are benefitted by bees.

Q.—2. Did they work on them this year? A.—Yes; they worked on the blossoms, but not on the fruit.

Q.—3. Are there any varieties of the strawberry which produce stamens only? A.—Nearly so. Michel's Early produces much stamen and little fruit; also most wild strawberries produce abundant stamen, or pollen, and very few berries; they are profitable to set for fertilizers.

Q.—4. Do you think the wind, or insects, have the most to do with the fertilization of the strawberry? A.—The wind has more, or will fertilize more than the bees, but both are needed for a successful yield. I am not partial, as I grow over 25 acres of strawberries, raspberries and blackberries, and have no bees, but my neighbors have bees. I believe bees are very beneficial to almost all fruits, especially apples, plums, berries and pears; as for peaches, I feel unable to say.

Yours truly, JACOB FAITH, *Fruit-Grower.*

True, this man has the misfortune to live in Missouri, but he is an authority on berries all the same, and can quote varieties up into the hundreds that would make that little array of names of Friend Secor, quoted to overwhelm me, look very small.

This ends the personal element of this discussion so far as the department of "Notes and Comments" is concerned, and for fear, after reading Mr. Secor's article, some one should conclude that all the mission the conductor of this department has is to "out-talk Missouri farmers;" and, as his intelligence seems also to be in question, he begs permission to submit the following from a man who is not a "Missouri farmer:"

COLLEGE OF AGRICULTURE AND EXPERIMENT STATION,
UNIVERSITY OF MISSOURI.
Office of Dean and Director.

COLUMBIA, MO., March 11, 1895.

MR. E. T. ABBOTT, St. Joseph, Mo.

Dear Sir:—At the close of our short practical courses on subjects connected with the pursuit of agriculture I wish to thank you, on behalf of the College, for the admirable manner in which you have dealt with the subject of bee-keeping. You possess the true teacher's spirit, as is manifested by the lively desire of many of the young men who attended your lectures, not only to learn more of the art and science of bee-keeping than was possible in the short time you gave us, but actually to begin keeping bees at the first opportunity that might present itself. I confess a similar wish arose in my own heart, and, while in my younger days I had read with much interest Huber's works, the nearer duties of life had put my enthusiasm in the wonderful economy of the bee's household to sleep, until your most interesting presentation aroused it again to something like its former strength. I thank you for it.

With no desire to flatter you, I will say that the liveliness of your discourse is increased in value by accuracy of scientific statement, and the general tenor of practical mastery with which you impress your audience. We shall certainly want you again next year, when I trust the Board of Curators will succeed in securing your services for a sufficiently long and extended course of lectures to do justice to the real importance of the subject. Why! such instruction as you have just given our students should be given in every school of the land, and I take the liberty of advising you to let people know how thoroughly both professors and students here feel with your work, and how gratefully they speak of its merits.

Yours truly,

P. SCHWEITZER, *Acting Dean and Director.*

☞ See "Bee-Keeper's Guide" offer on page 447.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Introducing Queens.

1. Could an Italian queen be successfully introduced to a colony by catching the old queen when the bees are shaken from the hive, and placing the caged queen over the frames?

2. Could the same method be pursued also in transferring bees by the "driving" process? F. C. E.

ANSWERS.—1. A queen may be introduced at any time to a colony whose queen has been removed, by putting the new queen in a cage in such condition that the workers will be perhaps 48 hours in eating away the candy to let her out. Generally it will be successful, and it would be as likely to succeed at swarming-time as any other time.

2. It can be used at transferring, or any other time.

Killing Off the Drones.

I have 17 colonies, and drones have been out for about three weeks, but the bees are killing them off just the same as they do in October. What is the cause of it? They never did so before. W. J. S.

Guelph, Ont., June 17.

ANSWER.—If this killing of drones is general with all colonies, it means that there is a dearth in the provision market, or rather in the nectar market, and when the honey-flow stops the economical little creatures conclude they can't afford to support in idleness a lot of useless consumers. Sometimes you may find a single colony killing off its drones when others leave them undisturbed. In this case you will probably find that the colony has reared a young queen, and when she gets to laying, the bees think there is no likelihood of drones being needed for some time.

Bees Ventilating—Queen-Cells at Swarming-Time—Spider-Webs About Hives.

1. Why do the bees stand at the entrance of the hive and keep their wings in constant motion?

2. How many queen-cells are generally built by colonies sending out a swarm?

3. Is there any way to prevent spiders building about a hive, except by brushing them away whenever they appear? H. K. H.

ANSWERS.—1. Hold the back of your hand down close to them. Cool, isn't it? Blows quite a little breeze. Those bees are "ventilators," and they are making a current of air so that fresh air will get into the hive. It also helps to evaporate the nectar or honey.

2. There's no fixed number. It may be three or four, or it may be 40. I read of 170 in one case. I should say, at a rough guess, usually 10 or 12.

3. Probably the best preventive is to have hives so constructed that there is no lurking place for spiders. Spiders never are troublesome about my hives, nor are they any more so, I suppose, about any plain hive, but a hive with a portico gives a chance for webs to be spun. I've known spiders to build webs under a hive-stand, and they are to be cleared away and grass or other convenience for spiders' webs removed.

"I Don't Know"—Swarming.

1. There seems to be only one fault with the Bee Journal, and that is, there are too many "I don't no's" in it, and in a good many places in it says "something must be done," but does not say what.

2. On page 251, some one says, "Bees will swarm and keep swarming" if you cage the queen. I must be in the dark, for I supposed if the queen did not accompany them, they would return. Can you enlighten me? F. H. B.

ANSWERS.—1. Yes, it's a pity that "I don't know" occurs so often, but I don't know any way to avoid saying "I don't know" when you don't know something you're asked about, do you? I don't know that it would make it any better to stop saying "I don't know," and pretend to know when you don't. I don't see the use, either, in saying "something must be done," if no one knows what is to be done.

2. The statement I made on page 251 is entirely correct, and you are just as correct in supposing that the bees of a swarm would return to the hive if the queen did not accompany. The swarm issues, and the excluder at the entrance keeps the queen at home. The bees return, but there's nothing to hinder them going again the next day and returning again, and they may keep that up for days. At any rate, that's the way my bees have acted when the queen was fastened in the hive.

Two Queens in a Hive—Queens and Drones Eating.

1. Will bees tolerate more than one fertile queen at a time in a colony?

2. Can the queen go to the honey and eat it without the aid of the worker-bee? I mean go to the comb honey in the hive. Also, can the drone eat without being fed by the worker-bees? I. S.

ANSWERS.—1. As a rule they will not. Every now and then an exception occurs, but usually, if not always, it is a case of mother and daughter, the aged mother remaining for a time after the daughter has assumed the duty of egg-laying.

2. The queen can and does help herself whenever occasion requires, but during the busy time of egg-laying I'm not sure that she ever does so. The workers may be seen constantly offering her food, and this food is prepared so that she doesn't have much digesting to do. If she had to eat undigested honey and pollen, she could hardly lay the enormous number of eggs she does. As to the drone, I don't know. I do not remember to have seen a drone help himself, although I have often seen workers feeding drones.

Dry Weather—Stings Have a Bad Effect.

This is going to be another bad year, as it is so dry. I wintered 8 colonies in the cellar, and they did well until after fruit-bloom, and since then they have not made a living. They have not swarmed any yet. To-day they are killing off their drones, so that is a bad show for swarms or honey this year, and if it doesn't soon rain we will have to go to feeding all around here, and there is no fun in keeping bees and getting no honey.

I think that I had better go out of the business, for when I get stung it makes me faint away from 15 to 60 minutes, and I am getting very much afraid of being stung. Is there any danger when it affects one that way? Sometimes I have a chill, and sometimes I get so itchy that I could scratch the skin off. G. R. M.

Rockford, Ill., June 17.

ANSWER.—As a rule, those who have to do with bees become habituated to the stings so that they have little effect. Formerly my son became spotted all over when a bee stung him, itching as you do all over, but he grew accustomed to stings so they did not affect him in that way. I have read of others, however, who did not seem to take so kindly to stings, being no better off after further trial. If stings affected me so badly, and each sting seemed just as bad as the last, I think I should let some one else handle the bees.

A Question on Swarming.

Your answer through the Bee Journal was thankfully received a few weeks ago, regarding a colony in a box. I followed your instructions, by making a smaller box, and took up some of the space inside, something like 750 cubic inches. The bees swarmed June 13, and they clustered on a small tree for about five minutes, which they left and went back to the hive. They have not swarmed any more. What would be the cause of their going back? I have a super with 24 sections on top of the old box, and the bees seem to be working all right in them. The weight of the old box, or hive, is about 100 pounds, and is boiling over with bees.

Aspinwall, Pa., June 21. J. K. E.

ANSWER.—Sometimes the old queen is unable to fly with the swarm, and in that case there's nothing left for the swarm to do but to return to the hive. Generally they do not give up swarming on that account, but try it a day or so later.

Then when a young queen emerges from her cell, the swarm issues with the first young queen, the old queen being put out of the way. Possibly your bees may have swarmed about the date of your writing, for a young queen is usually ready to go with a swarm eight or ten days after the issuing of a prime swarm. Still, the bees sometimes give up swarming, especially if there is a failure in the yield of nectar.

Size of Italian Bees—A Queen's Sting.

1. It is an established fact that Italian bees are larger than blacks. Do the Italians rear the young bees in larger cells than the blacks? If so, when an Italian queen is introduced in a hive where all the combs have been built by the black bees, will the bees that hatch out be stunted in size? And if so, will that defect be overcome after hatching?

2. I have heard that the queen has a sting shaped somewhat like a shoemaker's awl, but without the barbs of the worker-bee's sting. Is this the fact? NOVICE.

ANSWER.—1. I don't know how well established it is that Italians are larger, but I never heard of their being less for being reared in combs made by blacks. A drone reared in a worker-cell is much dwarfed in the process, and he doesn't overcome it after hatching. I've seen workers of very small size that had been reared in cells made small by being squeezed together, and I don't think they ever got any larger. I've seen workers hatch out of drone-cells, but they didn't seem to be any larger than common.

2. A queen's sting is curved instead of being straight like a worker's. But it has barbs. The sheath is more heavily barbed than the worker's, but the darts are nearly free from barbs.

Wintering on 8 Frames—Golden Italians.

1. Can a full colony of bees (that is, one large enough to gather a good surplus of honey the following year) be wintered in the 8-frame lower hive-story of the Langstroth frame size?

2. What are "golden Italians?" P. A.

Evans, Ky.

ANSWERS.—1. Hundreds of colonies have been wintered in 8-frame hives. Unless closely watched, however, there is more danger that they may run short of stores than in hives holding more frames.

2. Bees with more than three yellow bands, especially those with five bands, are often called "golden Italians."

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

Supers on "Swarms."

1. When a swarm issues, and about three frames of comb and five empty ones are used, would you allow them to go into the upper story, or confine them below?

2. Would you keep any colony in the lower story when sections are used, or give free access?

Hurrah for the "Southern Department!" It is just what "we beginners need." J. J. W.

ANSWER.—1 and 2. I would confine them to the lower story for three or four days until they get fully settled down to work, then I would give free access to the super. Fill your sections at least two-thirds full of foundation, and if they are not over 1⅞ inches wide, it will be very seldom that the queen will go there to deposit eggs.

Feeding for Winter—Direction of Flight of Absconding Swarms.

1. When is the best time to begin to feed weak colonies for winter—before the honey-flow stops, or not till after?

2. A man who keeps bees here asked me this question, and I could not answer it: Why do bees, when they swarm and take a notion to leave, go west or southwest? If they go east, or any other direction, they don't go far—not over ¼ mile. I have followed them for miles when they went west, and couldn't find them. S. L. D.

St. Leo, W. Va.

ANSWERS.—1. It is best to get weak colonies strong in bees and stores *before* winter; but if you cannot, then do the feeding after the fall flow; and feed as fast as they can take it up.

2. I think when they wish to "change base," they pay no attention to the "points of the compass," but to the accessibility of the woods or forest without reference to north, south, east or west. This has been my observation.

Drones and 5-Banded Bees—Wiring Frames.

1. When a queen-excluder is used, and brood-frames in the upper story, would you cut out all of the drone-comb?

2. Is there any queen that rears bees that will show all five bands, and no others?

3. Should a drone-trap be used to catch all drones when not swarming?

4. I wire my frames with the common six-strand clothes' wire separated—is it good or not? J. J. W.

ANSWERS.—1. I would cut it out.

2. To answer this question in the affirmative is to exact more of the poor queen than she can do. There may be some rearers of 5-banded bees that would "cuss," otherwise.

3. If you rear queens and desire them purely fertilized, all objectionable drones should be caught; but in a large apiary some drones should always be preserved to fertilize queens in case the bee-keeper has not surplus fertilized queens at command, for very often a queen may meet with some mishap, and unless she can be replaced, the colony will be lost.

4. Such wire is too thick. Number 28 to 30, Brown & Sharp's gnage, tinned wire is best.

Late Drones—Bee-Forage—Transferring.

1. I want to rear some queens next fall to introduce to some of my black colonies. How can I rear drones so late, say in September, after all the black drones are killed?

2. I have bought a farm. What is the best forage-plant for me to sow for the bees to get honey from?

3. I had two swarms to issue the other day at about the same time. Both tried to cluster together, and I covered one up, and the other went back to the box-hive; since then I have found four queens dead in front of the hive. What made them do that way? Would you transfer it yet, or is it too late? C. R. R.

Harden Station, N. C., May 23.

ANSWERS.—1. It is very difficult to get bees to rear drones in the fall. Select a strong colony with an old queen, and place three or four frames containing both drone and worker-comb in the brood-nest, and then feed three or four ounces of sugar syrup regularly every evening to stimulate the queen. This should be done in July and August. The combs must be carefully watched, and as soon as drone-eggs are laid, the comb containing them must be removed to a queenless colony for rearing and keeping, as it would not be safe to allow them to remain with the old colony, for bees sometimes are liable to change their notions.

2. Try Alsike, melilot, white clover, etc.

3. They concluded to give up swarming, and destroyed all extra queens. It is not too late to transfer, if you do it where robbers can't get at you, but you must see that they have sufficient stores.

The "Trial Trip" Offer of the Bee Journal to those not subscribers—10 weeks for 10 cents—will be withdrawn July 15. This is positive. It is hoped that all who have taken advantage of our liberal "short term" offer will so appreciate the Bee Journal as to subscribe for a year at the expiration of their 10 weeks. Remember, the time for sending in names on the 10-weeks-for-10-cents offer, expires July 15. I trust those who subscribe for a "trial trip" for their friends, will be able to secure them as regular subscribers, and thus earn some of the premiums offered in the Bee Journal for such work.

Among the Bee-Papers

Gleaned by Dr. Miller.

DIVISIBLE BROOD-CHAMBERS.

I have never used the double brood-chamber in any but my home yard. In the out-yards I have always used full brood-chambers exclusively, and I have always secured from the out-yards as good crops as from my home yard, and with as little labor, everything considered. The largest yield of comb honey I ever secured from a whole apiary (147 pounds per colony) was from one of these out-yards of full brood-chambers. My youngest son is 21 years old, and I wish him to succeed to my bee-business. I wanted my boy to throw down all nonsense. The battle would be hard enough then. I resolved to use but one style of hive hereafter, and a choice had to be made from the dozens of good hives I have thoroughly tested; the double brood-chamber among them. The hive selected was the full brood-chamber, wire-end-frame hive, that I invented 35 years ago. I shall probably never make another shallow brood-chamber hive.—B. TAYLOR, in Review.

KEEP QUEENS LAYING.

Don't unqueen your colonies simply because you have ordered queens. Most breeders can fill orders promptly now, but your case may be an exception. Besides, with the best methods of introduction, there is no necessity, at this time of year, to remove the old queen until the new one is to be put in.—Review.

CAUSE OF SWARMING.

The queen's change from quiet toleration of the open cells to violent antipathy toward the sealed ones needs explanation. The reason is very plain, I think, when we hit upon it once. The queen in that matter goes wholly by the sense of smell. Whatever smells like a queen she attacks; and the young princesses take on the scent of fertility just at the period of their lives when they are nearly ready to be sealed in. While it may not be the only cause of the first swarms issuing, I think we may lay it down as reliable that the queen's irrepressible conflict with the sealed cells is by far the most important factor. If we can cancel this factor we can "do the sum."—E. E. HASTY, in Review.

EXPERIMENTS IN WINTERING.

Experimenter Taylor reports results of experiments in Review, giving full tables. He did not find any satisfactory indications that the presence of mold affected wintering one way or the other. With regard to the relation of amount of stores consumed to diarrhea, he says:

"As would naturally be expected, the amount consumed increases steadily with the evidence of a deposit of excrement. Whether the too great consumption of food caused the voiding of the excrement, or whether the conditions leading to the voiding caused the consumption, or whether some other condition, as moisture, was the cause of both, may be made a question; they will at least be interesting subjects for further experimentation. It was perhaps unfortunate that the bees were so well supplied with natural stores last fall that no feeding was necessary, as a considerable number of colonies supplied exclusively with stores of sugar syrup in combs free from bee-bread would have added interest and value to the experiment."

He says regarding upward ventilation: "My conclusion is that upward ventilation appears to increase somewhat the tendency to an accumulation of feces, and also at least in this experiment to decrease the strength of the colony, and if this appearance is real we may conclude that the upward movement of the air disquiets the bees, and causes a larger proportion than otherwise would, to leave the cluster and perish."

ASPINWALL'S INTRODUCING-CAGE.

L. A. Aspinwall describes in Review his cage for introducing queens as follows:

"The method is one I have employed the past three seasons to the exclusion of all others. It consists of a cheese-cloth cage. The frame is wood, to which the covering is secured by small tacks. As the material costs but five cents per yard, they are quite inexpensive. Muslin will not answer. To make the frame, take a piece of soft wood ⅜x½x3½ inches long for the top-bar, and two pieces 1½ inches long for the ends—bore a ¼-inch hole nearly through one end piece in the direction of the greatest width, preferably near one end, to receive food for the queen. With 1¼-inch brads nail through the top-bar in the direction of the greatest width into the end pieces, making a frame without bottom-bar 1¾x1½ inches, inside measurement. The food hole should be below. Over this frame fasten the cheese-cloth, using eight small tacks, leaving one corner open to receive the queen. The cloth in width should not exceed the frame in length, and for cool weather may be slightly less. To hold it between the frames when introducing, two small pieces of tin are fastened to the top-bar so as to swivel upon the nails which hold the frame together.

"A cheese-cloth cannot be opened, or a release effected in less than from five to twelve or more hours. While so occupied the bees are filled with excitement over the presence of a queen, which tends to raise the temperature and impart a like scent to both. The first recognition is by scent only, there being no contact through the meshes as in wire-cloth cages, thus creating animosity which requires time to overcome. A gradual opening of the cage also favors feeding and making acquaintance with the new queen.

"Although the cage is opened slowly, the method is rapid, and precludes any preparation for queen-cells.

"The colony to receive the queen must be in a normal condition. During the ordinary season it must contain a queen, and brood in the regular stages. An artificially formed colony, made with brood-combs and bees from three or four colonies will not answer. Being composed of bees strange to each other, they seemingly sulk for a day or two. Such a colony should be furnished with a cell, or, after their construction and removal, the cheese-cloth cage will work admirably."

WATER FOR BEES IN WINTER.

A Russian, Czieselski or Tseselsky, has been making some interesting experiments regarding the way in which bees get the moisture they need in winter. It is well known that honey attracts moisture in a damp atmosphere. At a temperature of 76° three grains of uncapped honey will in 24 hours absorb from .584 to 1.032 grains of water; at 50°, from 1.527 to 3.034 grains of water, thus absorbing fully its own weight of water in 24 hours. So when bees need moisture in winter, they uncap honey in advance of their needs, and the uncapped honey gets from the air and from the breath of the bees the necessary moisture.

UNITING WEAK COLONIES.

Doing this in the spring is not very satisfactory. We have about come to the conclusion that, if they can care for their queen, it is better to let them alone unless we have queenless colonies, and then they may be united to advantage with a weak one that has a queen. Feeding out-of-doors does more to build up weak colonies, and give them heart and health, than uniting. We crowd them down on to two or more combs, cover up warm, and let them alone.—MRS. L. C. AXTELL, in Gleanings.

WINTERING IN BEE-CELLARS.

H. R. Boardman discusses this in an interesting manner in Gleanings. Doolittle had asserted that bees would winter well in a damp, and even moldy, cellar. Boardman prefers a dry one, and backs up his opinion by his experience, he being one of the very successful winterers. He says: "Artificial heat I know to be a good thing," in which view he and I stand almost alone.

Admitting Doolittle's success in wintering in moist repositories, he reconciles the differences of practice in this way:

"Cold and moisture are destructive to the bees when they meet as allies; but so long as they do not come together they are comparatively safe. Bees will endure severe cold if dry. They will also withstand much moisture in a high temperature."

Honey as Food and Medicine.—A new and revised edition of this 32-page pamphlet is now issued. It has 5 blank pages on which to write or paste recipes taken from other sources. It is just what its name indicates, and should be liberally distributed among the people everywhere to create a demand for honey. It contains a number of recipes on the use of honey as food and as medicine, besides much other interesting and valuable information. Prices, postpaid, are: Single copy, 5 cts.; 10 copies 35 cts.; 50 for $1.50; 100 for $2.50. Better give them a trial. Send all orders to the Bee Journal office.

That New Song—"Queenie Jeanette"—which is being sung everywhere, we can send you for 40 cents, postpaid, or club it with the American Bee Journal for one year—both for only $1.10. Or, send us one new subscriber for a year (with $1.00), and we will mail you a copy of the song free.

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Editorial Budget.

Mr. Chas. E. Parks, the Secretary and Treasurer of the well-known bee-supply firm of G. B. Lewis Co., Watertown, Wis., died July 1, after an illness of several months. His death will cause no change in the management of the business of the firm with which he was so prominently connected. I hope to give a more extended notice later.

"Foul Brood—Its Cause and Cure," is a Special Bulletin issued by the New Jersey State Board of Agriculture for the benefit of bee-keepers residing in that State. It may be had by addressing Franklin Dye, Secretary of the Board, Trenton, N. J. It consists of an article on the subject named, by Mr. Wm. McEvoy, the successful Ontario Foul Brood Inspector; to which is added a page or so of Dr. Howard's book on foul brood. It is a credit to all concerned in getting it up.

A Better Bee-Keepers' Organization in this country is one of the greatest necessities, and in which all should be interested. Mr. Hutchinson expects to devote the July Review to a discussion of this subject, and in the June number he leads off with a very excellent editorial as an introduction to what may be expected in the July number. As Bro. H. states the case so clearly, I think I can do no better than to reproduce his editorial entire, though it be a trifle long. It reads as follows:

BETTER ORGANIZATION NEEDED AMONG BEE-KEEPERS.

Two articles in this issue of the Review, those of Messrs. Case and Marks, touch upon the matter of organization, and what it may accomplish. The topic is not a new one. Bee-keepers have long recognized the necessity for better and more thorough organization. It has long been deplored that the North American is not a representative body, and many are the schemes that have been devised for bringing about this most devoutly to be wished for consummation, but so far they have come to naught. The sending of delegates from the county societies to the State societies, and from the States to the North American is not possible on account of the expense. Perhaps the expense would be borne if there were sufficient incentive, such, for instance, as there is in politics. But political organizations are conducted upon a different basis, and with different ends in view than is the case with apicultural organizations. The half a dozen, or dozen, members of a county society do not feel like going down into their individual pockets and paying $1.00 each to send one of their members to the meeting of the State Society. There is a feeling that the delegate is a favored man (and he is); that he is going to the State meeting at their expense, and that no benefit will come to *them* from his attendance. And there would be no *direct* benefit.

A prosperous and powerful State organization of bee-keepers is a benefit to the bee-keepers of that State, and a national organization of this character is a national benefit, and a local bee-keeper who helps to build up a local society that sends its delegate to the State society, that in its turn contributes to the prosperity of a national organization, indirectly receives a benefit for the money and time so spent; but said benefits seem so far away in the dim and misty future, while the hard-earned dollar resting so snugly in the pocket seems too near and tangible to be parted with.

Having the local societies auxiliary to State societies, and the latter auxiliary to the North American is the plan that has always been proposed, and always failed—failed, I think, for the reason that I have given. Except in an indirect way the North American has nothing to give in return for the support that might come from the State societies, aod the latter have nothing to give in return to local societies for sending delegates. In mutual insurance companies, and other similar orders, each "lodge" is dependent upon the others, and all upon the grand "lodge" for existence; there is a direct, tangible motive for the building up of other "lodges," and a general support of the "order."

There is a certain amount of selfishness in human nature that must be recognized in all successful attempts at organization. A man does not use his money, time and influence in perfecting and building up an organization, unless there is at least a hope that he may reap some reward. One reason why the Bee-Keepers' Union has met with the success that it has, is because each member is privileged to call for help should he at any time suffer persecution. It is true that this was not the only motive. Professional pride, sympathy for a brother in trouble, a natural resentment against persecution, and a knowledge that such an organization would work to the good of bee-keeping in general, all had their weight, but would not have been sufficient in many instances. There was needed a personal, selfish interest.

The primary object of apicultural conventions is supposed to be that of discussing subjects pertaining to bee-keeping with a view to improvement. So thoroughly have the journals done their work, that, especially with leading bee-keepers, this motive for meeting is not a very strong one. The leading motive now is the social feature—to see the "boys," and have a good time.

To bring about a strong, efficient national organization of bee-keepers, every possible obstacle and cost should be removed, and every possible motive appealed to as an inducement for giving it support. For these reasons I think it would be better if the North American and the Bee-Keepers' Union were merged into one society. As it now is, the members and officers of the Union never hold any meetings. All discussions are made in the journals, or by mail, and all voting is done by mail. To the plan of voting by mail, I see no objections, but I do think it would be an advantage if the officers and leading members, or as many as wish to attend, could meet in convention once a year and discuss ways and means face to face. When there was a change made in its constitution three years ago, the subject was first discussed in the journals, then continued in a meeting of the North American where certain changes were recommended and finally adopted by the Union, a decision being arrived at by means of a vote made by mail.

The object of the North American is to meet socially and discuss apiarian topics for mutual improvement. The primary object of the Union was to defend its members against persecution, but its constitution has now been changed so that money may be used for *any* purpose thought advisable by the Board. I see no reason why these two national societies should not join forces, making one grand organization endowed with the characteristics now possessed by both. There could be the grand rally each year in a convention the same as is now enjoyed by the North American, the same class of topics discussed, and, in addition, there could be the free face to face discussion regarding that class of issues with which the Union has to deal. I think that it would be well to retain the name, North American Bee-Keepers' Association. I would also suggest that there be a President, 1st and 2nd Vice-Presidents, a Secretary and a Treasurer, and that these officers constitute the Executive Board. In addition to the duties that now devolve upon the Secretary of the North American, I would have him take up also those now performed by the General Manager of the Union. That is, if the two organizations were combined, I would have the combined duties of both executive officers performed by one man, and the society should have sufficient members so that the Secretary-Manager could devote a large share, if not the whole, of his time to the performance of these duties. It would seem that all of the bee-keepers in this great and glorious country could keep one man profitably employed in thus looking after their interests.

There are many things, aside from those already done by

the Union and the North American, that might be done by such an organization with an efficient executive officer at its head, and money in its treasnry. The feature mentioned by Mr. Case is a case in point, viz.: that of looking after and reporting swindlers. I don't know as the constitntion of the present Union would need any change to allow such work being done. Two or three times the Review has exposed some swindler, but this was not done nntil numerous complaints had been received, and considerable time had elapsed. To call a man a swindler because one man *said* so would often lead to nnjust accnsations. When an apparently jnst complaint is made, the Union could make a thorough investigation, more thorongh than one man could afford to make. As Mr. Case says, a man wonld "brace up," and do the fair thing by his cnstomers when he fonnd that his nnsatisfactory methods were likely to be pnblished to the members of the North American. I frequently receive complaints of fraud, unfairness, and nnsatisfactory methods of conducting business, but before publishing anything of this character, a pnblisher must have absolute proof of the correctness of such statements. To secure such proof is often too much trouble and expense for one man to bear.

Perhaps something might be done in the way of helping bee-keepers to secnre better prices for their honey, or to market it in a more satisfactory manner. Fruit exchanges have helped the peach growers of New Jersey, and the orange growers of California, and it is possible that something in this line might be done by honey-producers if they were sufficiently organized. All such questions as these wonld, of course, come np in convention.

There is much more that might be said on this subject, but the foregoing is sufficient to start the discussion.

W. Z. HUTCHINSON.

Right along this line, the following article written for Gleanings by Dr. C. C. Miller, in April, is very appropriate;

BEE-KEEPERS' ASSOCIATIONS IN GERMANY—WHY THEIR MEMBERSHIPS ARE SO LARGE.

I have a letter which I esteem very highly, not only because it clears up a matter concerning which I have for a long time been curions—the reason why the Germans have such large bee-conventions—but also becanse it comes from one whom I am prond to number among my friends, the able editor of the Deutsche Illnstrierte Bienenzeitnng (German Illustrated Bee Journal), who is already well known to the American bee-readers. I wish I could show to all of you his writing. Although past his threescore and ten, the address on the envelope would easily be taken for copper-plate. Althongh his letters are in the German language, in pity for my lack of familiarity therewith he never nses German script, but plain English letters, so his writing is read as easily as the printed page. But here's his letter, which loses by translation:

My experience agrees with yours in the matters you mention, except in the case in which you saw a queen kill a worker. To balance that, I once had a young queen sting me, which I had taken out of an after-swarm, and held in my closed hand. The sting did not remain in the flesh, and it was less painful than that of a worker. Since then I have had in my hand thousands of queens young and old, but have never again been stung by one.

I have read in Gleanings of Jan. 1 your statement concerning the number of members of the German Central Association, as also the remark of Ernest Root. Now I will impart to you the secret why it happens that the Centralverein (Central Association) has such a large membership, and if you wish you can betray the secret to Ernest.

In thickly populated Germany there are ministers and teachers who form about them little Vereine (societies or associations) whose members generally meet monthly or quarterly. Every one who has bees, even if only a couple of colonies, allows himself to be enrolled, without attending each meeting that is appointed. These small Vereine obtain at a very low price one of the reasonable bee-journals, as the Centralblatt or Leipziger Bienenzeitung for 1 mark (25 cents), or 65 pfennig (abont 13 cents) a year. Many of these small Vereine have their own bee-journals, which then cost more, but never more than 50 cents. These small Vereine (Special-Vereine) are united to the Centralvereine of the different provinces or small States. For example, the Mark, my province of the kingdom of Prussia, the Markische Centralvereine consists of 77 Specialvereine, with 1,539 members, who, in the fall of 1894, put into winter quarters 15,000 colonies.

Now comes, however, the principal thing, which explains all. All the Centralvereine receive a grant or allowance from the government yearly, and all the members share alike in this grant. Whoever is not in a Verein has no share in the money which the government grants yearly. Many of the Centralvereine receive so large an allowance that they deliver to their members one or more bee-journals free.

At the large conventions, where all the Centralvereine come together, extra money comes from the government, and even from private sources, from which premiums are offered, transportation paid on objects for exhibition, and often free railway passage, as well as payment for articles damaged or lost in transit. In Vienna it went even so far that the members had their common meals, including wine, *free*. "There's the rub," says Hamlet! Whoever is not a member of a Verein must wipe his mouth—that is, he gets nothing of all this.

I once traveled to a convention of this kind with a man who admitted that he no longer kept bees, but had himself enrolled in a Vereine, and paid his dues of 30 cents, for which he received the bee-journal and the opportunity of visiting strange places. In our deliberations at Kiel he took no part, but probably in all the favors, visit to the mnseum, man-of-war, etc.

Yes, Friend Miller, you must set all sail to procure such a cement in your States, which will not only secure many members, but also hold them together. Freundlich gruessend,

Wilsnack, Germany. C. J. H. GRAVENHORST.

For one, I feel like giving a vote of thanks for this information. Just the thing we needed. Now, can anything of the kind be done in this country? The answer has always been that distances are too great, and bee-keepers too scattered. Right there is the rock on which we have always split, depending for membership solely on those who could attend the meeting. You will readily see that not all the members attend the German conventions, but the inducements are sufficient to make a man keep up his membership, even if he never attended a single meeting. So while our great distances may count against the largest attendance at conventions, it counts for nothing whatever against a large membership.

The only thing needed, then, to bring us up on a level with Germany, and, for that matter, with Canada, is to get the grant from the public treasnry. I think I hear some one say, "Oh! there's no use. We can't get anything of the kind." How do you know we can't? I feel quite sanguine that there's just as much enterprise here as abroad; and if we go at it in the right way we can get all the help we need. Indeed, something has already been done. The bee-keepers of Illinois snceeeded in getting, at least for one year, an appropriation of $500. It was given to the State society, with the express stipulation that it should be used to spread information—in other words, to publish their report. Good was done by it; but it had very little effect in the direction of increasing membership. Probably a large nnmber had the benefit of the reports who were never members of the society, and, nnder existing circnmstances, never will be. With a large membership it would be much easier to get an appropriation from the State legislature.

Now, suppose the Illinois society receives another grant of $500; how wonld it do for them to profit by the example of their foreign brethren? I think it could be so managed as to make the society five or ten times as large, and still keep within the restriction that the money must be used for spreading information. Let's figure. Suppose the society make arrangements to furnish free to its members a bee-journal, and on any one of them it could probably get special rates so that, at the highest, it would pay not more than 80 cents per copy, the journal publishing in full the society's report. Now, suppose the membership-fee be placed at 25 or 50 cents. Does any one donbt that a large number would be indnced to join who are not now members, and many who now take no bee-paper would do so by paying to the society less than the regular subscription price of the paper, without saying anything abont the privilege of membership?

Let's see how the thing would come ont if the annual fee be placed at 25 cents. Allow $50 to be reserved for expenses, and we have $450 left. Each member pays in 25 cents, and the society takes that, and 55 cents more, to make ont the 80 cents it must pay for his paper. It seems clear that the society can afford to do that just as many times as 55 cents is contained in the $450. If I figure straight, that would make 818 members. Could not get 818? Well, then it could reduce the fee, making it only 10 cents per member, and take in 642 members. There's power in numbers, and I believe the thing to work for lies in that direction. The fact

that such a thing is done in one State will give strong leverage to work upon the legislature of another State. Don't you believe that, if bee-keepers push as they might, in a few years there might be large societies in each State?

Marengo, Ill. C. C. MILLER.

As there is now no grant in sight—the late Illinois legislature having failed to allow the usual $500—there seems to be but one thing to do, if a large membership of the North American is ever to be secured. It is this: Consolidate the National Bee-Keepers' Union with the North American Bee-Keepers' Association, as proposed by Bro. Hutchinson, then with the money now in both treasuries, there would be a fund of perhaps $800 with which to carry out the plan suggested by Dr. Miller.

While the Union has done noble work in behalf of its members and the pursuit in general, I believe that hereafter a continuation of the good work begun by the Union could be had, which would result in the benefits enumerated by Bro. Hutchinson. There is no doubt in my mind, that if we had an organization with only 1,000 members, or even 500, wide-awake bee-keepers, we could petition Congress or State legislatures in such a way that they would hear and—grant.

I do not believe a single member of the Union would object to the proposed new arrangement, but would gladly welcome the change now that probably sufficient valuable court decisions have been secured favorable to bee-keeping, that will serve as effective precedents for years to come.

But the proposed consolidation, as I understand it, does not contemplate a discontinuance of the defense work of the Union, for the new constitution of the North American already embraces that line of effort through what is termed a "Defense Committee."

This whole subject is of such vital interest to all that I feel it should be thoroughly considered in all the bee-papers from now till the Toronto meeting, so that some definite action can then be taken. Though I'm a good deal of a German myself, I don't see why we of America should be away behind our brethren over in Germany in the matter of organization, or in anything else. Why not out-do them in the line of a bee-keepers' association? North America has more bee-keepers, I think, and surely ought to have as much enterprise!

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

Canadian Beedom.

The Season of 1895.

A bee-keeping friend in Minnesota writes me:

"Bees in this vicinity have not stored any surplus as yet; it has been all they could do to get enough to live and breed up. A few swarmed in the first days of June, but have let up again. For the past few days they have worked on white and Alsike clover, but nearly all the clovers were injured or killed last season by drought, and this spring by late frosts. Linden was all killed in May by frosts. We don't expect any white honey this year, but there may be some fall honey."

The above would do equally well as a report from Canadian beedom, only that we have no prospect of any fall honey, there being but few honey-yielding flowers in the fall. Here the white and Alsike clover heads have a pinched look, and I think there is no nectar in them, for the bees do not seem to visit them at all. As in Minnesota, the linden is all killed, though the trees have produced a second crop of leaves.

Dr. Miller asks in a "Stray Straw" June 15—"Is failure to be our doom another year? June 4, white clover is in full bloom, but bees are doing nothing." Another writer in one of the bee-papers asks: "Is this to be the fourth season of failure?" Evidently, honey is becoming a very precarious crop, and it looks as if the logic of events will settle the question of specialty. Honey is getting to rank with products to which the proverb applies: "Catch as catch can." The safe place for bee-keeping is as one of the branches of a mixed husbandry, the main business of which is either general farming, truck farming, or fruit-growing.

The Toronto Industrial Exhibition.

This will be held at Toronto, Sept. 2 to 14. In the prize list of the department of "Honey and Apiary Supplies," over $400 is offered. The committee is composed of Messrs. R. J. Score, Geo. Vair, Jas. Crocker, and R. F. Holtermann. A copy of the complete prize list of the exhibition may be had by addressing Mr. J. H. Hill, the Manager, Toronto, Ont. Entries close Aug. 10.

The premiums offered in the department in which bee-keepers will probably be most interested, are as follows:

	1st.	2nd.	3rd.	4th.
Best and most attractive display of 50 lbs. of extracted granulated clover honey, in glass, quality to count 75 points, display 25 points.	$5	$3	$2	$1
Best and most attractive display of 50 lbs. of extracted granulated linden honey, in glass, quality to count 75 points, display 25 points.	5	3	2	1
Best display of 500 lbs. of liquid extracted honey, of which not less than 250 lbs. must be in glass, quality to count 75 points, display 25 points	20	15	10	5
Best 500 lbs. of comb honey in sections, quality as per score card to count 100 points, display 33; total, 133 points	25	20	12	6
Best 12 sections of comb honey, quality to be considered, that is to say, clean sections and best filled	6	3	2	1
Best 100 lbs. of extracted liquid linden honey, in glass, quality to count 75 points, display 25 points	8	5	3	—
Best 100 lbs. of extracted liquid clover honey, in glass, quality to count 75 points, display 25 points	8	5	3	—
Best 10 lbs of extracted liquid clover honey, in glass	4	3	2	1
Best 10 lbs. of extracted liquid linden honey, in glass	4	3	2	1
Best 10 lbs. of extracted liquid buckwheat honey, in glass	4	3	2	1
Best beeswax, not less than 10 lbs.	5	3	2	—
Best foundation for brood-chamber	3	2	1	—
Best foundation for sections	3	2	1	—
Best apiarian supplies	1. Silver Medal and $10			
	2. Bronze Medal and $5			
Best and most practical new invention for the apiarist, never shown before at this exhibition	8	5	3	2
Best six varieties of uses to which honey may be put in preparing articles for domestic use, the increase they are likely to make in the demand for honey, quality and originality to be considered	7	5	3	—
For the largest, most tasty and neatly arranged exhibit of honey in the apiarian department, all the honey to be the product of the exhibitor ($25 of this prize is given by the Ontario Bee-Keepers' Association)	30	20	10	—
Best display setting forth bee-keeping, the award given for the display which will be of the greatest value as a public educator. Some of the points to be illustrated being the natural history of the bee, method of bee-keeping, the magnitude of the industry. Any portion, or all of the foregoing sections, may be included in the above exhibit, and the articles exhibited need not be the production or manufacture of the exhibitor. ($25 of this prize is given by R. F. Holtermann, of Brantford)	35	25	15	10
To the exhibitor taking the largest number of first prizes for honey at this exhibition, 1895	1. Silver Medal			
	2. Bronze Medal			

The annual convention of the North American Bee-Keepers' Association will be held at Toronto during this exhibition, on Sept. 4 to 6. A fuller notice will be given next week.

Judging Honey at Fairs.

At the Stratford meeting of the Ontario Bee-Keepers' Association last January, the following score card was recommended to be used in judging honey at Fairs:

EXTRACTED HONEY.

Flavor	35
Body	35
Color	25
General appearance	5
Total	100

COMB HONEY.

Flavor	30
Sealed Cells	10
Freedom from Pop Holes	10
Absence of travel stain or propolis on wood or comb	10
Evenness of Color of Honey	10
Evenness of Comb (drone or brood)	10
Neatness of Crating	5
Style of Section	5
Total	100

Where display is to be considered as well as quality, it is recommended that display and quality count equally, and that in the consideration of display the following score be employed:

Magnitude	35
Originality	15
Neatness and Artistic Design	50
Total	100

Mr. Hutchinson's Second Article in the Cosmopolitan.

Since the notice which appeared on page 409 of the American Bee Journal was penned, the second and concluding article on "The Pleasant Occupation of Tending Bees" has come to hand in the June number of the Cosmopolitan. It is longer than the first, more practical, and conveys information which even parties who keep bees are not, all of them, familiar with. The editor persists in regarding the main population of a bee-hive as of the male persuasion, and subheads this second installment, "The completed story of the bee and his product."

A graphic account of cell-making introduces this second article. It is illustrated by a large picture of a frame of comb foundation which the bees have begun to draw out. There is also a life-like photogravure of the bees busily at work secreting wax and building comb. The festoons of live bees have a most natural appearance, while the bit of comb already built gives a striking air of reality to the picture. The management of swarms, extracting honey, wintering, arrangement of apiaries, and many other details are gone into with a clearness and simplicity that cannot fail to interest and delight the general reader. No fewer than 11 pictures accompany the descriptive matter in this article, the last being a representation of Hon. R. L. Taylor's experimental apiary at Lapeer, Mich.

Bee-keepers ought to make these two numbers (May and June) of the Cosmopolitan scarce by buying them up. They will be very useful to show to visitors, as they will explain much of the internal economy of the bee-hive without exposure to the danger of being stung. It may be stated that, with the July number, the Cosmopolitan will be published at the reduced price of 10 cents per number—a marvellously low figure for a magazine of such literary and artistic merit.

Report of the Ontario Bee-Keepers' Association.

This report, published by the Ontario Department of Agriculture, is to hand. It contains the proceedings of the annual meeting in full as taken by the shorthand writer, and subsequently revised by Messrs. Allen Pringle, J. B. Hall, J. K. Darling, and the Secretary, W. Couse. All the essays read are given in full. There is also a fair synopsis of the discussions, which, though not verbatim, is sufficiently full to give a correct idea of what was said. The Treasurer's statement, duly audited, shows in detail what the receipts and disbursement were. The total receipts were $872.04, and the expenditures $924.67, leaving a deficit of $52.63. This deficit was caused by abnormal demands upon the treasury, which are not likely to occur in the future. The report makes a royal octavo pamphlet of 60 pages, and is very handy for reference. Any one desirous of obtaining a copy should address the Minister of Agriculture, Toronto, Ont. These is no charge for them.

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Convention Notices.

CALIFORNIA.—The next meeting of the Tulare County Bee-Keepers' Association will be held in Visalia, Aug. 14, 1895. All interested are invited. J. E. YOUNG, Sec.
Visalia, Calif.

TEXAS.—The Texas State Bee-Keepers' Association will meet at Greenville, Tex., Aug. 21 and 22, 1895. Good premiums are offered for best exhibits. All are invited to attend.
Deport, Tex. W. H. WHITE, Sec.

Wants or Exchanges.

This department is only for your "Wants" or bona-fide "Exchanges," and such will be inserted here **at 10 cents a line** for each time, when specially ordered into this department. Exchanges for cash or for price-lists, or notices offering articles for sale, will not be inserted here—such belong in the regular advertising columns, at regular rates.

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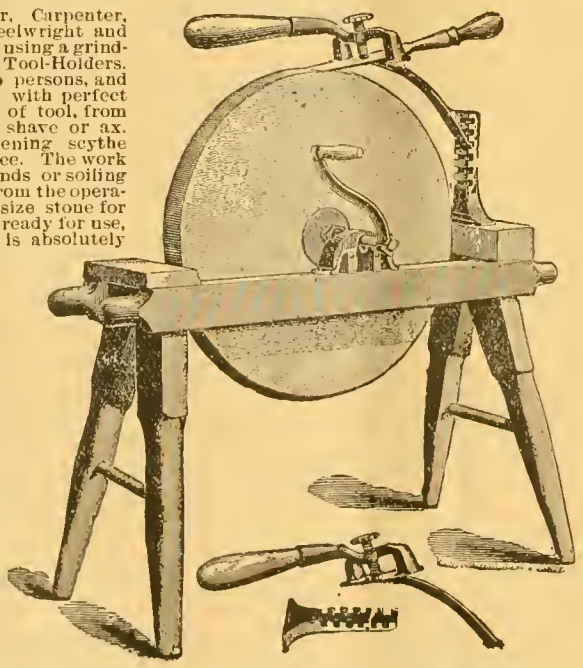

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General Items.

Bee-Keeping in Montana.

In the Bee Journal of April 11, "B" called for bee-notes from Montana, and Flathead Valley in particular. There are no bees in Flathead county at the present time. Being no botanist I cannot give very much information in respect to the flora. On July 4, 1894, at an exhibit of wild flowers, there were 108 different kinds gathered within one week, shown by one child under the age of 15 years. The soil is very fertile, and white clover does remarkably well wherever sown. There is nothing to prevent the successful growing of buckwheat, the soil and climate both being favorable. The climate is almost the same as that of southern Michigan, and the further fact that people in Missoula and the Bitter Root Valley have succeeded, leads me to believe that there would be no risk in introducing a few colonies here. The woods are full of trees and shrubs that blossom early in the spring, furnishing an abundance of pollen, and wherever a nest of bumble-bees is found, they have an unusual amount of honey stored.

I may say that I have ordered a colony of bees for experiment, and in another season will be able to give more particulars regarding bee-culture in Flathead Valley.

CHRIST PRESTBYE.

Kalispell, Mont., June 8.

Harvest Promises to be Fair.

The prospect of a honey crop with me this year are very poor. The frost we had killed everything the bees could work on. My bees are in very poor condition for the harvest, having been left out on the summer stands last winter, which weakened them, and killed about 25 per cent. As a consequence, they are very weak for the harvest, which promises to be fair.

G. F. TUBBS.

Annin Creek, Pa., June 13.

An Experience with Bees, Etc.

We had a short crop last year, and at present are in the midst of a terrible drouth, with wheat all gone, and oats nearly all dead. Corn is a good stand, looks well, but without rain it cannot make a crop.

Two years ago I commenced with one colony of bees in the dovetailed hive, and have increased to 10 colonies. I had no winter losses. I pack them in chaff in winter-cases out-doors. I had 3 strong colonies to issue this month, and all are now at work on alfalfa clover. I like to work with bees just spleudid. They will fly and alight all over me, but seldom sting, while some persons cannot come near without getting it in the face.

Last fall I fed my bees granulated sugar syrup until the brood-frames were all filled; this was left with them for future supplies. The first of March I discovered a dead queen lying on the entrance-board. I placed a frame containing brood and young bees in this hive, from a nice yellow 3-banded

queen, purchased two years since, and now I have in that hive a yellow queen, and a splendid layer at that, and appears to be just as prolific as the mother. I have one colony of hybrids; they are the poorest workers. I also have leather-colored Italians, but the yellow Italians "take the cake" for beauty, gentleness, and splendid honey-gatherers, and they are not nearly so apt to swarm as the others. In fact, when a colony has to be built up we almost invariably have to resort to the yellow queen for brood and honey.

I think the ideas presented by Adrian Getaz, on page 311, are just to the point. In one of my hives, whose colony swarmed, I found 10 queen-cells, also a queen. I cut the cells out, and laid them by the side of the hive. After re-fixing the hive, to my surprise I found 2 queens crawling around the bunch, that extricated themselves from the cups. I placed them in queen-cages, with 8 workers as company. The cages had an abundance of candy in them, but by the next morning both queens were dead. Query: What caused the queens to die? My idea is, that they were strangers to the worker-bees, and they probably stung them to death.

I some time since noticed a great deal of theorizing relative to kind and color of Italians. I will risk the conclusion that the yellow bees are all right in each and every respect, although Dr. Miller and others are of the opposite belief.

I think I would like to live in a country South, where I could devote my entire time to bees and honey. There has been no bloom here yet to support new swarms, except alfalfa, as we are now in the midst of a terrible drouth. We will soon be obliged to feed granulated sugar in order to carry them over to the fall flow of honey from heart's-ease. B. F. HARFORD.

Randall, Kans., May 28.

Starting with Bees.

I like the Bee Journal very much; it gives me all the information I need in the bee-line. I started my little apiary the past spring with 4 colonies, and I am very much interested in it. I expect to have 30 colonies next season. This is a good place for bees. Mine at this time have stored quite a surplus. They have such bloom as white and red clover, linden, poplar, wireweed, and sour-gum bloom, and quite a number of other blooms to work on. I have one colony of Carniolan bees.

J. ARTHUR PIERSON.

Twistville, W. Va., June 14.

Treatment of Laying-Workers.

Seeing the item on page 329, in relation to a laying worker, I am tempted to give my experience with this bothersome kind of a bee.

When I looked over my bees for the first time this spring, I found one colony with only a small amount of brood—a place as large as my two hands, perhaps—and this was very irregular, many cells skipped, some with two or more larvæ in them, and all that were capped showed the bullet-shape of the drone-cell when capped. A laying-worker here, sure! How to get rid of it and save the colony was the next question, and remembering a suggestion found in the "A B C of Bee-Culture," I got a new hive and placed a frame of honey and two frames of foundation in it, and placed it on the stand where the one containing the laying worker was, and taking that about 10 or 15 rods away, I then shook all of the bees off the frames into the air. As soon as I had the frames cleared of bees, I placed them in the new hive except the one containing the brood and eggs from the laying-worker, taking out the foundation placed there. I then gave them a queen caged, which was liberated in the usual time, and was soon laying, and now the colony is doing as well as any colony could do.

Of course this might not always work, but it did not occupy much time, and saved the colony. I think if the colony is moved, and they mark their location after the worker assumes the duties of a queen, she will not know of the change in location and stands but a very slim chance to reach the hive after being shaken off the combs.

Auburn, Wash. A. S. BARBER.

Carniolans and Pure Italians.

I sent to Frank Benton, while he was in Austria (Upper Carniola), for two queens, to which he paid prompt attention, and they came through in 21 days, both in fine condition. I introduced them to strong colonies, and reared four young queens. They were as gentle as so many flies. The colonies were full of bees in the fall, but I got no surplus honey from them, while I got from 40 to 132 pounds from my Italians. When spring came they had all starved, so I want no more Carniolans. They were of a silver color, with small tints of yellow bands. Many people would take them for the native black bees.

There have been many queens sold for pure Italians that were nothing more than hybrids, for I have bought them for pure Italians, and found them so. I buy queens each year. I paid $6 for a so-called 5-banded queen from a Texas breeder, and her bees were all colors, from 5-bands to clear blacks. I am a farmer, and have been keeping bees for 45 years. I have 44 colonies now. GEO. I. WOLF.

Young America, Ind., June 11.

On the Bicycle in North Carolina.

Some may take an interest in the incidents, accidents, and happenings of a "bike" trip through a rough country to the Blue Ridge Mountains—some times called "The land of the skye." On June 2 I took leave of loved ones and friends, and afterward found myself taken charge of by that large-hearted bee-keeper, David Walker, of Pleasant Ridge, Gaston county, N. C. He was up to his eyes hiving those pesky bees that seem to know no let-up in swarming. Friend W. has 72 colonies, and despite the excessive swarming and wet, cool season, his surplus was quite fair. He is not a reader, but seems right well up on many of the "issues" of the craft. His smoker, which is of his own invention, is unique and substantial. His hybrids know enough

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to "let up" when he sallies forth with this weapon in hand.

This kind family had so intrenched themselves in my affection, that it seemed hard to depart. May their shadow ne'er grow less.

After a 25 mile run it was my pleasure to stop at the gate of one of North Carolina's most practical as well as successful bee-keepers—J. R. Morse, of Shelby. The report of this good friend of 100 pounds from one colony, begat within my breast a spirit of jealousy—though Friend M. may never know of it. Here we find under able management, not only bee-keeping, but a prosperous dairy business, together with poultry and fine Chester pigs. His most efficient help consists chiefly of his better-half, together with the bright-faced little ones who go about in such a quiet way one hardly knows of their presence. B.

Round Rock, N. C., June 12.

Curing Foul Brood.

On page 336 is an item from John H. Guenther, saying that he can cure foul brood. I would like to have him tell how it is done, and whether he can do it in all stages and conditions. M. E.

Hartford, Wis.

Five-Banded Bees.

I want to say that I heartily endorse the article on page 378, by John McArthur. If it were more trouble to rear a queen that would produce all 5-banded bees than it is to rear a queen that produces 2 and 3 bands, the 5-bands would lead. J. W. Henson.

Mt. Aerial, Ky.

Decaying Brood.

While looking over my apiary yesterday (June 12) I found brood like the sample I send you. The hive I took the sample from is the worst in the yard. I have looked over 60 colonies and have found almost all with a few scattering cells. The hive I took the sample from has quite a strong colony—it has six frames of brood, and they are full way to the bottom. This brood appears to be in spots—in some frames it is on the lower edge of the comb, and some on the middle, but the whole comb is affected with scattering cells! The combs in the center of the hive are the worst.

I have noticed in my other colonies, where I have found this brood, that it is in the center of the hive more than on the outside frames. All of my strongest colonies appear to be affected with the brood; in colonies that are almost ready to swarm I found some of it. I have been in the business for over eight years, and I have never seen anything like this. I have seen lots of dead brood, but the bees would always remove it readily, but they don't like to take hold of this stuff. They will gnaw the tops of the cells, and that is as far as they go with it. It dries down in the bottom of the cell like a little scab, and then they dig it out sometimes.

I have noticed some colonies where it is just affected, that the larvæ will straighten out and die before it is capped, and some will be almost fully developed to a bee. I was afraid it was foul brood, so I took a sample to D. H. Van Alstine, who has been in the business for over 35 years, and whose bees had foul brood once, and he said he never saw anything like it, and wanted me to send a sample to the Bee Journal office. Please examine it and let me know what it is, and what to do to get rid of it. I have found it in my weak colonies scattered the same as the others. D. B. Weber.

Seward, N. Y.

[I forwarded the sample of comb to Mr. McEvoy, Ontario's foul brood inspector, who writes as follows concerning it:]

Mr. D. B. Weber's colonies have got into a very unhealthy condition, from so much decaying brood. He should remove all such combs from the brood-chambers, so that they can't be used for brood-rearing, and give all such colonies full sheets of foundation to work out and rear brood in. If I had charge of Mr. Weber's apiary I would take the diseased combs out of all the strongest colonies first, and fill the brood-chambers with nothing but foundation after removing *every* comb. Then I would take the combs of diseased brood and tier them up on the weakest colonies for about 10 days, so as to get a lot of the good brood hatched out of them, which would make strong colonies of the weak ones: then at the end of 10 days I would take away all the old combs and shake the bees into a hive filled with foundation. By doing this he would end the season with nice new combs in every hive, and then brood-rearing would be carried on in clean, healthy combs.

If Mr. Weber's bees are not gathering any honey he will have to feed sugar syrup while the bees are drawing out the foundation, and *all feeding* should be done in the *evenings*. He should make wax of all the old combs when they are done with.

Woodburn, Ont. Wm. McEvoy.

Too Dry Weather for Bees.

The weather still keeps very dry in this locality, and bees are doing nothing. I have 50 good, strong colonies that were good, strong colonies when spring opened, still I have not had a swarm nor a pound of honey, and not much prospect of any unless basswood and fall flowers yield some.

I would like to say a word about 5-banded bees. Myself and one of my neighbor bee-keepers bought some to replace some *good* blacks and hybrids, and the result was every one of them are gone, and we don't care for any more just now. Still, it was a very bad winter here on bees, a good many losing all they had.

Let us here from some others in Michigan, in the American Bee Journal, and please name the county you live in.

F. E. Gibson.

Racy, Saginaw Co., Mich., June 20.

Binders for this size of the American Bee Journal we can furnish for 75 cents each, postpaid; or we will club it with the Bee Journal for a year—both for $1.60. We have a few of the old size (6x9) Binders left, that we will mail for only 40 cents each, to close them out.

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Honey & Beeswax Market Quotations.

CHICAGO, Ill., June 7.—We have our usual dull season which we look forward to and expect. Honey is entirely forgotten during the months of June, July and August. The market is pretty well cleaned up of all grades of honey, so the prospects are encouraging for the coming season. We are getting 13@14c. for light comb. J. A. L.

KANSAS CITY, Mo., June 19.—Supply and demand is light. We quote: No. 1 white, 1-lbs., 13@14c.; No. 2 white, 12@13c.; No. 1 amber, 11@12c.; No. 2 amber, 8@10c. Extracted, white, 7c.; amber, 6c.; dark, 5c.
Beeswax, 22c. C. C. C. & Co.

CINCINNATI, O., June 18.—Nothing new since our last. There is a fair demand for extracted honey at 4@7c. Comb honey is in slow demand at 12@14c. for best white.
Beeswax is in good demand at 25@31c. for good to choice yellow. C. F. M. & S.

CHICAGO, Ill., May 23.—The trade in comb honey is very light at this time of the year—as it is between seasons. Soon we will get the new crop, and it will come on a bare market. Just now what little comb sells brings 14c. for the best grades. Extracted, 5½@7c. All good grades of beeswax, 30c.
R. A. B. & Co.

PHILADELPHIA, PA., June 18.—The new crop of comb honey is arriving slowly, and is in fair demand. No new extracted honey has arrived in this market as yet. We quote: Comb honey, 9@13c. Extracted, 4½@6c.
Beeswax is still declining. The adulteration of beeswax has demoralized our market this spring, and has hurt our sales considerable. Price, 25@27c. W. A. S.

NEW YORK, N. Y., July 6.—The market is about bare of comb honey and there is no demand at the present. The market is quiet on extracted. Demand is limited, with plenty of supply arriving to meet the demands and more. We quote: California, 6@6½c.; Southern, choice, 60@65c. per gallon; common, 50@55c. per gallon. Beeswax is declining and selling at from 29@30c. at present, but the indications are that the price will decline still further. H. B. & S.

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Best Bees for Comb Honey and for Extracted.

Query 978.—1. What kind of bees is best for comb honey?

2. What kind is best for extracted?—Wis.

W. G. Larrabee—1 and 2. Hybrids.

J. M. Hambaugh—1 and 2. Italian.

Wm. M. Barnum—1 and 2. Italians.

A. J. Cook—1. Hybrids. 2. Italians.

Chas. Dadant & Son—1 and 2. Italian bees.

J. P. H. Brown—1 and 2. I prefer the Italians.

C. H. Dibbern—1. I prefer hybrids—Carniolan-Italian.

B. Taylor—1. Blacks crossed with Italians. 2. Italians.

Eugene Secor—1 and 2. A good cross between the Italian and German.

P. H. Elwood—Italian hybrids. 2. The same for this locality (New York).

Jas. A. Stone—1 and 2. I will take the Italian—first, last, and all the time.

W. R. Graham—1 and 2. The bees that are best for all purposes—the Italians.

Emerson T. Abbott—1. Blacks, with a mixture of Italian and Carniolan. 2. Italians.

Mrs. L. Harrison—1 and 2. I do not know. I'm satisfied with Italians for all purposes.

R. L. Taylor—1 and 2. The cross between the Italian and the German is the best I have found.

G. M. Doolittle—1 and 2. Italians and a first cross with the black bee, generally known as "hybrids."

Allen Pringle—1. "My kind"—say blacks or Germans and hybrids. 2. "My kind"—say Italians.

E. France—1 and 2. Carniolans are my choice. But any of them are good in a good season, and good for nothing in a poor season.

Dr. C. C. Miller—1. I think I would rather have Italians, all things considered. 2. I don't know. Italians are good, and a mixture of the despised Punic blood has done well for me.

Mrs. J. N. Heater—1 and 2. Hybrids usually make whiter cappings, but for quantity and quality, and a general all-purpose bee, for either comb or extracted honey, the Italian is the bee for the work.

H. D. Cutting—1 and 2. That depends. I prefer Carniolan bees for fine appearance, and that brings the most money, and in my locality they gather just as much honey, and in several cases a little more.

M. Mahin—1 and 2. Those are pretty hard questions. I am inclined to believe that the Syrians are best for both comb and extracted honey. They have proved, after years of trial, superior to Italians, in my experience.

G. W. Demaree—1 and 2. Italians and their crosses, for both comb and "extracted from the comb." The dark, inferior bees lay on a thicker layer of wax when capping, which gives the sealed comb a dry, white appearance that tickles the fancy of some people; but the straight Italian and her crosses finish a slightly cream-tinted comb, that simply and urgently invites you to eat it right away.

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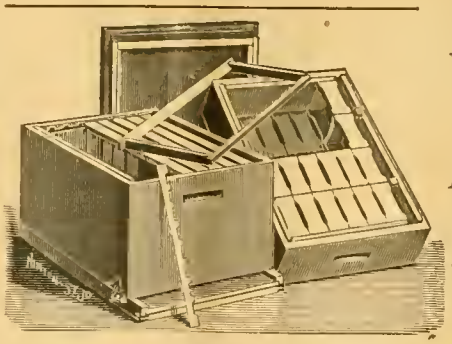

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AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS

35th Year. CHICAGO, ILL., JULY 18, 1895. No. 29.

Contributed Articles.

On Important Apiarian Subjects.

No. 7.—The Production of Extracted Honey.

BY CHAS. DADANT.

Before proceeding to give our views on the methods of putting up extracted honey, and the care to be given to this product, I wish to say a few words concerning a remark made by one of the contributors of the American Bee Journal a few weeks ago. This gentleman says that it is a mistake to advise bee-keepers to use several supers on top of each other, and that it is better to extract the honey as fast as it is harvested. Our reasons for using several supers on the hives are two-fold. First, it is next to impossible to extract from the only super that is on a hive, during a big flow of honey, without harvesting a large amount of unripe honey which has jnst been gathered, at the same time with the ripe honey. On the other hand, the reader must bear in mind that we are giving our own methods, and that in our practice, with four or five apiaries, we find it inconvenient to extract any of the honey while the crop lasts, as the bee-keeper must attend to several apiaries, and cannot afford to spend two or three days in succession in any one of them at that time.

As for the danger of losing the combs, from moths, during a bad season, we are not at all afraid of this. Whenever we have lost combs, it has been the neglect of some one to keep the screens of the honey-house windows well closed. Moths cannot live over winter in a honey-house where no fire is kept, in this climate, and the moths would have to be brought from the outside. In a well-conducted honey-house, where old combs from colonies that have died late in the spring are either rendered up in wax or sulphured, or used for new swarms, there is no danger of moths. We have now had three bad honey seasons in succession, and we have a number of surplus cases with the combs in them that have not been out of the honey-house in all that time, and yet they are as perfect as when taken off the hives.

The different grades of honey which are harvested during the spring crop cannot usually be kept separate, as they are generally harvested at the same time. Basswood and clover go well together, and a slight tinge of basswood rather makes clover honey more pleasant. Basswood honey alone is too strong, and a poor product to sell. Honey-dew is very objectionable, whether by itself or mixed with other grades, but we have yet to find a method of compelling the bees to harvest it separately. As a matter of course, we do not leave the honey from the spring crop on the hives, but extract it as soon as the first honey season is over. In some localities, further north than ours, the two crops, spring and summer, almost run together, but there are always a few days of suspension, when the first crop may be removed from the hives to make room for the yellow honey of fall blossoms.

After the extracting is over, the first thing that requires attention is the capping can. We usually leave the cappings in it, for a week or two. If more than one canful have been taken, they are kept in a barrel with one head taken out, and after the last batch has been well drained, those in the barrel may be drained again, until they are nearly dry. After this we wash these cappings in hot water, to remove the last particles of honey that may remain. It is a mistake to render up the capping into wax without first washing them, as the honey is lost, and this is very useful to make vinegar or wine, metheglin or mead. If neither viuegar nor wine is wanted, they may be kept until cider-making time, and then washed, and the water may be added to the cider with profit. To make a fair article of either cider or vinegar, an egg should float at the top, part of the egg, about the size of a nickel, showing above the water.

The water in which we wash the cappings is heated about 140°, or nearly to the melting point of beeswax. We stir them in it, and afterwards dip them out and press them in a small press. They may afterwards be rendered into beeswax according to methods described elsewhere. The water which remains seems turbid and dirty, but this is only apparent, for if the business is conduced with cleanliness, there is nothing in the water but honey, a little pollen and broken bits of wax. The wax is thrown off by the liquid during fermentation, and the other impurities are deposited at the bottom of the vinegar or the wine after fermentation has stopped. To induce fermentation in the sweetened water, any fruit-juice may be used that is at hand; neither does it take very much of it in warm weather. Blackberries, raspberries or grapes will give the liquld a nice red color.

But we have stretched this subject rather longer than anticipated, and will have to leave the question of honey-packages for another time. Hamilton, Ill.

What Dr. Miller Thinks.

REMOVING QUEENS.—On page 406, Adrian Getaz says removing queens at the honey harvest has produced splendid results with thousands of colonies. Not with him, but with Elwood and others. It hasn't worked well with me, and I think conditions here are much the same as in New York, the main harvest being over with clover. Perhaps the fault is mine, but I wish Bro. Elwood would tell us if he thinks as much of the plan as ever.

Isn't there something just a bit lame about the reasoning of Mr. Getaz? He counts a gain by rearing no brood for 19 days, the honey harvest being over by the time the brood

would hatch. True, an egg laid to-day will not be a crawling bee for 21 days, and will not be a field-bee for 16 days more, but I suspect that at the end of 21 days, or as soon as it emerges from its cell, that it makes a difference in the field force. That will leave his reasoning good for 21 days, but the white honey harvest sometimes lasts more than twice that, and at the last end there will be a falling off of field-workers due to the removal of the queen.

Young Bees for Wintering.—If B. Taylor is correct in placing the blame for his losses last winter (see page 407), it may be well for us to stick a pin there, and feed when forage is so scarce as to stop brood-rearing in September. We know, I think, that there is a difference as to the length of time bees gather in different years, and we know that queens stop laying some years sooner than others. It seems reasonable that the two things should go together. Bro. Taylor's view seems reasonable, and it's worth while to watch the matter in the future.

Wintering on Langstroth Frames on End.—On page 407, Thos. Thurlow reports success in wintering bees on Langstroth frames stood on end, and the same thing has been reported before, but subsequent silence makes it uncertain whether any one has continued the plan for many years. I think it was first mentioned as much as 10 or 15 years ago, perhaps much longer. Will those who tried the plan years ago tell us what they think of it now? Certainly there are some points about the plan that have a good look, but actual practice is what really tells.

Have others found to be a fact what Mr. Thurlow emphasizes, that bees will go through capped honey in winter to get to the top of the combs? If so, what will be the use of his alternating the frames as he proposes, "to try to keep the bees from going to the top and leaving honey below them?"

Bees and Strawberries.—Bro. Abbott gets aid and comfort on page 408, and if enough more such testimony comes in it will have to be admitted that in some places bees work well on strawberries. But what kind of strawberries has Wm. C. Ashby, that working on them made the bees drive him out of the patch? If there is no mistake in that case, there may be a possibility of a re-trial in the first case of the Bee-Keepers' Union, in which Freeborn's bees were charged with driving sheep out of a field.

Ed Jolley thinks some have failed to take Mr. Abbott as he meant, and I think they will also fail to take Bro. Jolley as he means, for he can hardly mean what he says, at least unless I am away behind the times as to the manners and customs of strawberry plants. He gives it as a "fact" that all varieties of strawberries produce both staminate and pistillate plants, and then he teaches that you can have a bed of either staminate or pistillate plants by properly selecting the runners, no matter what the variety. If Bro. Jolley means what I understand him to say, then it is possible to have a bed of Wilson or Jessie that shall produce nothing but pistillate blossoms. Did Bro. Jolley, or did any one else, ever see such a bed? And if what I understand him to say is true, then there is no variety for which it will be necessary to furnish staminate blossoms of another variety, and the universal teaching of fruit-growers in this respect is all wrong.

Bro. Jolley questions the use of staminate plants for the production of strawberries. Bro. J., can you raise a crop of Crescent strawberries with no staminate blossoms within a mile?

Sweet Clover.—Wm. C. Ashby will either change his views about sweet clover if he observes more closely, or else it does not act the same in Utah as in Illinois. He says on page 408 that it must be cut for hay before it blooms, "hence it would do your bees no good." From the window where I sit I look upon sweet clover that was cut when a good height, and now it is high enough to cut again, and is just coming in bloom, perhaps a week later than if it had never been cut. If cut now it will bloom still later. So far as the bees are concerned, I would always prefer to have it cut when at the best stage for hay, for then it will do the bees more good after white clover is gone.

Breeding Out the Swarming Habit.—On page 419 is asked the question whether it is possible, and whether it is desirable, to breed out the swarming habit. The man who tries to base an opinion upon the answers there given will find himself in a very mixed state of mind. The answers are necessarily short, and I should like very much if the writers would give us some reasons for believing the swarming habit can or cannot be bred out; also the reasons for thinking it desirable or undesirable. A good-natured discussion thereon might be interesting and profitable.

That Michigan Law.—Walter Harmer writes me that he has it from a member of the legislature that a law was passed as I formerly stated (page 390), and adds, "There must have been gross carelessness somehow, mixed with ignorance, I guess." I suspect the intelligence of Michigan will not allow that law to be unrepealed very long. Marengo, Ill.

An Experience with the So-Called Honey-Dew.

BY J. A. NASH.

A few years ago several of the Western States, including Iowa, were favored (?) with a heavy flow of honey-dew—(I believe "flow" to be, in this case, at least, the proper term.) I had seen the so-called honey-dew before this, but it was clearer, or else mixed with honey, as it was not so rank in flavor or dark in color. Never in a long experience with bees did I see anything to compare with this in point of quantity or lack of quality, other than very *poor* quality. A basswood flow never stirred my apiary up as early in the morning, or kept bees out as late as did this alleged honey-dew. Hives were soon filled from top to bottom; there was little lost time except in the heat of the day, when the "dew" dried up a little. I say but little lost time—the time spent in gathering this "bug-juice," as some one facetiously termed it, was, however, much worse than lost, as it was not fit to eat, and the bees did not winter well on it. I lost at least ¾ of my apiary, after feeding quite a number of colonies from which the honey-dew had been extracted.

Now I had always supposed that honey-dew was secreted by plant or bark lice. This could not have been the case with the kind that came under my own observation. I do not think there were lice enough of any kind in Jasper county to have furnished the exudations that came on the leaves of the hickory trees in our own bee-range; nor did it fall from the skies, as I took the trouble to cut off a hickory branch, wiped the honey-dew carefully from the leaves, examined it closely for lice (that I did not find), and put it away in the shop. This was done in the evening. The next morning the tops of the leaves were again covered with spots of dew. I had previous to this climbed a tree that was at some distance from other timber on which the dew was very thick, and cut off the top of it; the dew was just as thick on the leaves that were uppermost as before, showing that it could not have been spurted from the bodies of lice—it was always on the *tops* of the leaves, never on the stems, as far as I could see, and often stood in drops. While riding through the woods in the early morning my coat was so daubed with this secretion that it was soiled, and my horse's mane was quite sticky. Bee-hives that stood under hickory trees at the home apiary had the

covers spotted, where the wind blew the drops from the leaves above.

I extracted this stuff by the barrel, intending to feed it the next spring, and fed up as many colonies on sugar as I thought I could afford to. I would better have fed them all. The hives containing honey-dew had the fronts spotted with the excrement of the bees early in the winter. The colonies provided with stores of sealed sugar syrup were quiet and clean. My cellar is very dry and warm, and is a first-class winter repository. About the middle of March the weather became warm, the ground was dry, and I put the bees out for a flight. Many colonies were dead, others very weak, and all, except the sugar-fed colonies, filthy in the extreme. In the evening I put the bees all back that were living, and closed the cellar. I did not put out over a dozen of the colonies I had fed the fall before, as they seemed in perfect condition, and the work was hard, as there were many hives to handle.

In the midst of all this ruin and loss I consoled myself with the assurance that the sugar would bring out a part of the apiary in good condition, but the "Best laid plans of mice and men gang oft aglee." The spring was late and cold, and when, in the latter part of April, I placed the bees on the summer stands, my "sugared" colonies were but little better than the others. Were they not diseased by the foul air of the cellar filled with hives fairly rotten with diarrhea?

As to what this so-called honey-dew was, I do not know. I believe it exuded from the leaves—how, or why, I leave it to our scientists to explain. In the winter it granulated, looking like a very poor grade of brown sugar, leaving several inches of a very dark liquid on the top. The granulated part was not as sweet as the other. There was no fall crop, consequently honey was scarce, and many bee-keepers sold this stuff for what they could get. It retailed here in sections at 10 and 15 cents per pound. It was not fit to eat, and I never sold a pound of it. In the spring my honey-dew soured, and I threw it away. It cost me several hundred dollars, but if it comes again I will know what to do with it—extract every drop and feed the bees. Monroe, Iowa.

The Kingbird or Bee-Martin.

BY J. W. ROUSE.

According to the report made in 1893, of the Secretary of Agriculture, the claim is made that the kingbird, or bee-martin, as it is most commonly known, is not harmful to the bee-keeper. I take some exceptions to this claim. According to the report, "Among the 171 stomachs of the bee-martin examined, only 14, or less than one-twelfth of the entire number, contained any traces of the honey-bee, while the total number of bees found was but 50; of these, 40 were positively identified as drones, and only 4 were unquestionably workers. The remains of the other 6 were so fragmentary as to render impossible anything beyond the determination of the species."

Since locating here, now nearly five years ago, I have been troubled with the bee-martin, and I am sure it has been a source of considerable loss to me. To settle the matter for myself, I have watched these birds closely, and have seen them either fly, or sometimes sit, near where the bees are flying, and saw them by ruffling their crest on the head to attract the bees to them, when they would gobble them up. They seem to understand this method, or operation, perfectly, as I have noticed them very frequently, and whenever they ruffle the crest, it seems to attract the attention of the bees, which attack the bee-martin, but the bee looses her life almost every time. I do not believe this movement of the bird would attract the drones, but to make doubly sure that I had made no mistake, I have, after watching the bee-martin gobble up the honey-bee as described, shot the bird, and on opening the bird's stomach and gizzard I would there find the remains of the honey-bee it had been eating.

The claims of the Report referred to are that the bee-martins are a great insect-eater, but that they destroy a very large number of insects that are harmful to the agriculturist, and but few honey-bees, so that the good they do largely overbalances the value of the bees that they may destroy. I would perhaps be willing to abide the loss of what honey-bees they might get from me in consideration of their destroying other injurious insects, but for the fact that when the bee-martin is plentiful in queen-rearing time I notice that my loss of young queens is very much greater when taking their wedding flight than it is when I kill off the bee-martin in this vicinity. While I have never been able to detect them catching a queen, or found any in dissecting the bird, I am sure that they destroy them, for the reason that in rearing young queens when the bee-martin is around my loss is sometimes nearly 50 per cent., until I go gunning, after which my loss of young queens is very greatly reduced.

As to their catching drones, that does not bother me any, but the size and rather sluggish flight of the queen makes them an especial target, and their rather slow motion makes them an easy prey for the birds. If I was not rearing queens I would not pay much attention to them, unless they nested close to the apiary, as it is when they have a nest of young ones that their depredations are so very pronounced. So if Mr. and Mrs. Bee-Martin choose to make their home in close proximity to my apiary, they do so at a very great risk of their lives. Mexico, Mo.

Killing the Bees Instead of Wintering.

BY ED JOLLEY.

As I read the article by John McArthur in reply to Mr. Bevins (page 297), I was led to wonder if the wheels of progress had slipped a cog, and had the slip taken us back half a century, or whether some of the brethren were really that far behind the times. Has honey-producing degenerated so far that it is necessary to rob the hive of its winter stores and murder the inmates to make a living? If it has, it is time for all bee-keepers who have a conscience, to turn from their beloved pursuit and take up something less trying.

Fifty years have come and gone since the invention of the box-hive with top-storage drawers, that the apiarist might take his share of the bees' well-earned stores without resorting to the sulphur-pit, which had heretofore prevailed. Since then invention after invention has been made in behalf of the bee. The manipulation of the bee has become a science. We can go to the hive at the close of the harvest, and we can take what we see fit—we can leave much or little—and too often it's little. But here is one who goes a step further and takes all.

In defense of his position he ridicules the attachment which every true bee-keeper must have for his bees. He argues that no one has conscientious scruples against killing the cow that furnishes him with butter and milk. But that argument is weak in the back. The bee provides its own living, hunts its own pastures, gathers its own winter stores, and furnishes a surplus more than ample to pay for the hive and attention furnished by man; its carcass is of no use after it has been deprived of its life. On the other hand, the cow must be provided for from the time she is born up to the butcher's block. She cannot more than pay for the feed and trouble of taking care of her, with butter and milk, and justly surrenders her body in beef to pay for the three years' raising before she became a cow. The food derived from her body is a necessity for man's subsistence. If the cow secured her own forage, gathered and filled her own stable with hay; then if you killed her and threw her carcass away, that you

might sell her hay and thereby swell the weasel-skin, then you would have a a parallel case.

Mr. McArthur says the main object of bee-keeping is to put dollars in our pockets. While I believe every bee-keeper desires to receive a just remuneration for time and money expended, I hardly think the chief attraction is the greed for gold. For surely no other field gives more uncertain and varying returns than bee-keeping. Few, if any, of our fraternal friends who could not reap a richer harvest along other lines, with the same persistent energy and perseverance. The fascination of bee-keeping is not to be reckoned in dollars and cents. Dr. Miller said he never was happier in his life than last fall, notwithstanding his average per colony, according to the Progressive sleep-walker, was not more than ¾ of an ounce! Now, if he had strangled his bees, *a la* McArthur, and had taken their winter stores, he might have had a snug fistful of dollars to put in his pocket; but the bee-keepers would never have had that happy expression from the Doctor.

The genuine, enthusiastic bee-keeper has a strong attachment for his bees, be it due to over manipulation and fostering care in breeding up to strong colonies; if otherwise, the affection does exist, and I feel sure it will ever be strong enough to shield them from the strangling fumes of the sulphur-pit. The combination of honest labor and economy, as we find it in the hive, is deserving of a more fitting reward.

Franklin, Pa.

A Plea for Planting for Honey.

BY R. S. RUSSELL.

I have a few trees of what is known here as "sugar haugh," and I admire them very much, both for their bloom and fine fruit. They bloom here about six days before poplar, and 10 days after all other fruit-bloom is gone, and the fruit ripens at the beginning of winter. They are wonderful bearers of wormless fruit of good quality. As they bloom in the midst of our greatest honey-dearth, they are greatly appreciated by the bees, and they swarm on them until you would think the flowers would be ruined.

The tree resembles the white thorn somewhat, yet it is a much finer tree, with less thorns, and is evidently a stranger from the far north, as it is not plentiful, and of different character from any varieties I have ever seen. The fruit ripening so late in the season, I think it deserves a position with our greatest honey-plants. I hope I am not too enthusiastic, yet I am one of the apparently few who believe fully in planting for honey, if we hope to continue in the business and produce the finest quality of honey, and I can only view it as a crime against our industry for teachers and professors to still be declaring, from many parts of the world, that same old, old theory, the very conditions of which have passed, never to return, a generation ago, that "*It does not pay to plant for honey alone.*"

Perhaps 75 years ago, with our boundless forests of honey-producing trees and rich vegetation, the assertion may have been correct, and if so then, there is no evidence to sustain it at this time. I think it is high time this old theory should have prompt treatment, and our people urged by every means the importance of planting, and if possible improving and multiplying our honey-plants until honey-dearths and failures will cease to be recorded.

We all love the "old reliable" American Bee Journal, and think that it is the greatest "honey-plant" of all. I think it should be planted first of all in every bee-keeper's library in the land, as it is running over with the richest of "nectar" every week in the year. Zionsville, Ind.

☞ See "Bee-Keeper's Guide" offer on page 463.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Sweet Clover—Is it a Weed?—"Sweet clover is a sort of a weed."—Editorial note in Gleanings.

How is this, anyway? Let us see. A weed, according to Webster, is, "A plant growing in cultivated ground to the injury of the crop or desired vegetation, or to the disfigurement of the place: an unsightly, useless, or injurious plant." According to this definition sweet clover is not even a "sort of a weed," for it is neither unsightly, useless, nor injurious; but on the other hand has been proven a profitable crop both as a forage-plant and as a fertilizer of the soil, and what delicious honey the bees do gather from its flowers!

While I am on this subject I want to say a word for alfalfa. A friend, who lives in northwest Missouri, said to me a few days ago that his alfalfa was the only thing which had stood the severe drouth, which, until a few days ago, we have been having, and that it would produce a good crop of hay. Since it is one of the finest honey-plants in the world, I think it will pay farmer bee-keepers to try a small patch of it, and see if it will not do as well for them.

I fully agree with Dr. Miller that it would be a good plan to sow the "hog lots," which produce nothing but dog-fennel, with sweet clover, alfalfa, or some other useful plant. If all the waste land of the country could be made to produce some nectar-yielding plant, how much the honey would add to the annual income of the country! Perhaps many do not realize what a large portion of the land of the country is uncultivated. I quote from the Report of the Secretary of Agriculture for 1893:

"Of the total country only 18 per cent. is improved. The better developed eastern part (east of Colorado) shows only 29 per cent. improved, and even the long-settled Atlantic coast, which we are apt to consider fully occupied, still possesses 65 per cent. of unimproved land."

Allowing one-half of this to be woodland, there is yet plenty of room for sweet clover, even if it were a useless weed aside from honey-production.

Manual for the Study of Insects.—There is no more interesting subject for study than the habits of insects, their life history, method of development, food, etc. To those engaged in rural pursuits, the science of entomology has a double value on account of its economic bearing. To know the insects that are injurious, and those which are helpful to man is of great practical utility. I feel sure the readers of the Bee Journal will deem it a special favor to have their attention called to a reliable work treating of this subject in such a way that it can be understood, not only by the student, but by the average man or woman in the ordinary walks of life.

Such a work has been prepared by Prof. John Henry Comstock, of Cornell University, and his daughter, Anna Botsford Comstock. It is published by the Comstock Publishing Co., of Ithaca, N. Y., and sells for $3.75; postage, 32 cents. It contains over 700 pages and hundreds of illustrations, and a series of analytical tables by means of which the family to which any North American insect belongs can be determined. Send to the publishers for sample pages, which will give you a clear idea of its great value.

One cannot have too many such books. During the long winter evenings, when time seems to drag heavily on their hands, many farmers' sons and daughters would find both diversion and information in a work like this. Children will learn useful things just as quickly as they will useless, if only the same opportunity is given them. Education is largely a question of early environment.

Bee-Culture Fairly Profitable.—"Unquestionably it is a fact that bee-keepers' profits are considerably curtailed to what they were a few years ago, but I am very far from endorsing the opinion that bees cannot be kept at a profit; indeed I would go so far as to say that it is the most profitable industry the cottager can engage in, providing that a fair amount of care and attention is given at the proper time (not necessarily always meddling and fussing with them) and that he leaves to others the experimenting with the many new fads and theories, and is content to conduct his apiary, be it large or small, on commercial principles, with the maxi-

mum of efficiency at the minimum of expense."—A. D. Woodley, in British Bee Journal.

Mr. Woodley brings out a number of good points in this brief quotation. One of them is that honey-production in the future must be carried on at a less profit than in the past. This is not only true of this special branch of agriculture, but it is true of everything produced on the farm. So the important lesson for us all to learn is how to get the maximum results out of the minimum of labor.

That is a good suggestion of his, too, to not be always fussing with the bees; and surely the best thing the average bee-keeper can do is to leave the "experimenting with the new fads and theories" alone. Here is one of the blunders that many beginners make: Just as soon as they own a colony of bees they get a notion that they must test all the "new fads" and "traps" of which they have had the misfortune to learn. In a very short time they gather about them a lot of tools, the use of which, if they have any use, they know but little. The result is, that in a few years they quit the bee-business in disgust, with a good-sized museum on their hands, which could be bought at about ten cents on the dollar.

There is a fair profit in bee-keeping, taken one year with another, but the fellow who starts in with the idea that "there are millions in it" is very apt to find out when it is too late that he has set his eggs under the wrong hen.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Peppermint as a Honey-Plant.

Is peppermint a good honey-plant? Will bees go three miles to gather honey from it? There has been 50 acres of peppermint set out this spring, just three miles from my bees? W. C.

ANSWER.—That's an interesting question, and I hope you'll investigate and tell us all about it after the field comes in bloom. In the meantime, I should say that you might expect peppermint to yield well, and your bees to work on it at that distance unless they could find something nearer home.

Is It Foul Brood?

I have several colonies that have what I fear is foul brood. The brood is sealed very scattering, and the unsealed larvæ takes on a brownish color and dies; then gets real brown and looks like corruption, and then dries up. The sealed brood has no holes in the cappings. I had one colony affected last year, and this year I have 6 or more. My apiary consists of 110 colonies. J. F. L.

ANSWER.—I would not like to say positively, but I should fear the worst. Consult thoroughly back numbers of the Bee Journal, and Dr. Howard's book on "Foul Brood."

Italian Drones—Gathering Honey, Etc.

1. Does a pure Italian queen produce yellow drones, or are they dark, the color of a hybrid bee? I have bought some queens which were said to be pure, but their drones are dark.

2. Does the worker-bee, when it is gathering honey, gather nectar from two or three different kinds of flowers before it returns to the hive?

3. Do bees, in gathering honey from different flowers, store it all together, or do they keep it separate?

4. I notice my bees, when I look at them, and give them a little smoke, they gorge themselves with honey. Do they put that back into the cells?

5. In transferring bees from box-hives to frame hives, ought the combs to hang the same end down as they did in the old hive? S. L. D.

ANSWERS.—1. Very likely you are looking for more yellow on an Italian drone than you will ever see. They are not yellow all over, and don't have distinct bands like the workers, but are more inclined to a mottled appearance.

2. As a rule it works on only one kind, but when forage is scarce I have seen a bee go back and forth from one kind of flower to another. I think I have seen it stated that in such case they gather only nectar and no pollen.

3. If bees work on a dozen different kinds of flowers on the same day, you may find all the kinds of honey in one cell, but in actual practice you will find only one kind of honey in the same cell, for bees are likely to work on clover alone, or else on linden or some other of the chief sources. But the kinds of flowers that yield a small amount will probably have their honey mixed.

4. I don't know from actual observation, but at a guess I should say that most of it generally goes back, but they take a slight commission to pay them for the fright.

5. Probably better so, but not absolutely necessary.

Flavor of Poplar Honey.

Is poplar honey bitter? GRACE W.

ANSWER.—I think poplar honey is the same as whitewood or tulip-tree, and is quite dark in color, but I never heard of its being bitter. Perhaps some of our Southern friends can tell us more about it.

Bees Leaving the Hive After Transferring.

This summer I have been transferring quite a number of colonies, and I have had some trouble in them leaving the hive. Do you know the cause? G. E. L.

ANSWER.—I can only make a rough guess without more particulars. You don't say whether the bees leave in a body or gradually, nor when they leave. If they leave in a body just after being transferred, I should say things might be too dauby and close for them. The excitement caused by so much broken honey in a hive with only a small entrance for ventilation might be enough to drive them out, but I should rather expect them to return. If the hive, after transferring, is set on a new stand, then I should expect the field-bees to leave for a day or two and join some colony near the old stand.

Is It a Case of Foul Brood?

How can I tell if I have a case of foul brood or not? I have just examined a colony that about three weeks ago was as strong as any I have, but now they are pretty weak. I find that there is a great deal of dead brood, but there is no ropiness to it, that I can see; it has no smell that I can detect, and has no pin-holes in the sealed brood. The color is not brown, but of a white nature, and decayed-like; and when I pull out any, there is a watery fluid that separates from the mass. Please let me know, as if there is any chance of foul brood I want to burn it. I don't want to experiment. J. M.

ANSWER.—Your question shows that you are familiar with the symptoms of foul brood, and I doubt if I know anything more about it than you do. I don't believe there's any foul brood in the case, but in a question of so grave importance I should rather have the opinion of some one practically familiar with the disease. What does Mr. McEvoy think of it?

A Question on Management.

I bought three colonies in 8-frame shallow hives, that is, the frames are only 5¼ inches deep, the same length as the Langstroth. Now, as I wanted increase instead of honey this year, I divided and made eight, and I think I had good luck, as they seem to be doing finely. In place of a super I have given them a hive the same size of the Langstroth, and put starters 2¼ inches wide in the frames, and they are commencing to work in them some. Now if they should finish the combs in the large hives, can I put the large hives on the bottom, and the shallow hives on top, with a queen-excluder between them, by and by, and so get the brood in the larger hives, as I think the small hives too shallow, and wish to transfer to the larger hives? Will the eight frames give room enough for *good* colonies; or should I have two hives and 16 frames for winter?

My bees are a cross between the Carniolans and blacks, but I think they are very gentle, as I handle them without any veil, and usually with my sleeves rolled up. I usually have a smoker with me, but do not use it much, unless it is to drive the bees from the end of the frame where I want to take

hold of them. I haven't been stung a dozen times this summer. H. A. S.

ANSWER.—With 2¼-inch starters and room for the queen to do considerable laying in the shallow frames, I'm afraid the bees will build a good share of drone-comb in the deep frames above. Especially is this the case while they have it above, and are treating the upper story somewhat as a super for surplus. If you want the bees to occupy the deep hive as their winter quarters, the sooner you get the brood-nest settled in it the better. I think I would right away put the deep hive below, put the queen in it, and an excluder over it, and then the shallow hive on top. That will make the bees more likely to fill out with worker-comb, although I like to have the frames filled with worker foundation best.

The one-story 8-frame hive will be enough to winter in, only you must look out or they will get scarce of stores. If they winter out-doors, they may be all the better for two stories, or even in the cellar, if you don't mind the trouble of getting the two stories in and out. Or perhaps it may be a good plan, just as soon as they have the combs about filled out in the deep story, to put the shallow story under again, leaving them without an excluder to occupy either story or both at their pleasure. That will allow them more room to store away a supply from the fall yield.

Uniting Colonies of Bees.

I found two small colonies of bees, and would like to know how to unite them. Should I destroy one of the queens? E. S.

ANSWER.—Go when they are busy working in the fields, put the frames of brood with adhering bees together, alternating them, first a frame from one hive then from the other. The bees will take care of the extra queen to suit themselves, unless you have a preference, and kill the poorer queen. Another way is to set one hive over the other—the upper hive must be without bottom—and put a piece of heavy paper between, with a hole in the paper just large enough for a single bee to go through. Let each hive have its own entrance. If one of the hives is some distance from where the united colony is placed, you may count on some of its bees going back to the old stand, and probably uniting with the nearest colony.

Getting Rid of a Laying Worker.

Please tell how to find a laying worker, and if there is any other way to supersede a laying worker than to find and destroy it. BEGINNER.

ANSWER.—I don't know how. I never saw but one laying worker that I know of, although I suppose I've had hundreds of them. It seems pretty well established now that there may be not only one, but a large number of laying workers in a colony. You can't tell a laying worker from any other by her looks. In perhaps most cases it doesn't pay to fuss with a colony having laying workers, for it is weak and has nothing but old bees. Break it up and distribute the bees and combs among other colonies. If very strong, however, it may be worth saving as a distinct colony. I think I have always succeeded when I have put into the colony a young queen not 12 hours out of the cell. Giving a queen-cell may succeed.

May be Paralysis—Bees and Strawberries.

One of my colonies has some disease that I cannot ascertain the nature of. This colony was not strong in the spring, and as fast as they hatch out they come to the outside of the hive, walk around a few times, turn over on their backs and die. There is nearly a handful some days outside. I have taken the frames out and inspected them, and everything looked, as far as my knowledge of bees, all right. Please tell me the cause of their dying, and what I should do for them.

Right now I wish to state that my wife and I both have seen bees working abundantly on strawberry blossoms, but I cannot see a bee on apple blossoms, and four cherry trees were in full bloom right over the strawberries, and never a bee on them. I think the saline air of the sea coast affects the different fruit and flora bloom. E. L. E.

Victoria, B. C.

ANSWER.—Your description points somewhat toward bee-paralysis, and I cannot say for certain whether there's any sure cure. By looking at late numbers of the American Bee Journal you will see different remedies, but so far there is no agreement. Perhaps the most popular thing is to change queens. Very likely if you let them alone entirely the disease will disappear as it has with others. It does not generally continue for any length of time as far north as you are.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

Proper Size and Shape of Hives.

Much has been said, and much practice has been done, and all to get at the proper dimensions of the bee-hive. There is much difference of opinion in regard to the size and shape, and construction of the hive, but so it is in almost everything, and in order to get at the best of anything we need to exchange notions and opinions. We have extremes in almost everything, so we think we have extremes in the bee-hive talk and practice as well as other things. Some men want a long hive, while others want a small one; some want one shape, and others another shape.

Now, I think locality and climate have much to do with deciding what should be the best size of a hive for that immediate locality and climate. But as to the best shape of a hive, it has nothing to do with it, and it seems to me in order to get at the proper shape of the hive we must first consider that we cannot educate bees; yet we may constrain them to build their combs differently from what they would have built them had they been left to their own uncontrolled will.

In the first place, if we will but note bees when they swarm and cluster, the shape of the cluster will tell you something. Then, in the second place, note them build combs left to their will, and see if in one week's time their combs are not one-third longer up and down than they are horizontally; and so on their whole course of building combs is sure to be longer up and down, and not horizontally. Then that being the case, it brings us to conclude that the shape of the hive should be something to correspond; that the shape of the hive would be better adapted to the bees made deeper than longer—that is, deeper frames, or the longest way of the frame up and down instead of the long, horizontal frame, like the frame used in the Langstroth hive.

Now suppose you stand on end the Langstroth frame in a hive, and see if you have not come nearer filling the wants of the bees naturally than when you hang it in the hive as we generally do. That brings us to consult our own convenience, instead of considering the bees' natural instinct.

I think the nearer we can come to the natural instinct of the honey-bee, in giving them a hive to build their nest of combs in, the better for them.

Then, again, after finding out what shape of hive will suit bees best, we will have to consult our convenience—it does not agree with the bees' natural instinct; what is best for us to do under the circumstances? I think we should construct our hives as nearly as possible to suit the wants of the bees, considering the cold in the North and the heat in the South.

Looking over the hive question (which is certainly a very important one), and with many years of experience, I conclude that a hive, in the first place, should have cubic inches enough for the brood-chamber to suit the locality in which you live; then, it seems to me, a hive of about equal dimensions in length and width, and a little deeper than otherwise, would suit the bees best, and suit us as well as any other shape.

Then I prefer the tiering-up plan—that is, one chamber on the brood-chamber, or more, as the need may be, and never interfere with the brood-chamber for honey. Then our bees are always in good condition.

These are only my views on the hive question, which I have obtained from long experience. I would also, for my locality, prefer a medium-sized hive in cubic inches. It seems to me that a hive, or brood-chamber, should be of sufficient size to hold enough stores to last from the close of the season until the full opening of the next season. Then by not interfering with the brood-chamber stores, we almost always have our bees in good condition, and take only what honey is stored above the brood-chamber, either in sections, or by the tiering-up plan for extracting. W. R. GRAHAM.

Greenville, Tex.

Canadian Beedom.

Summer Losses of Bees.

We are familiar with the term "winter losses," but the phrase "summer losses" is a new thing under the sun. In the Bee-Keepers' Review for June, the following editorial paragraph appeared:

"Bees are dying in some parts of this county. I mistrust that it is of starvation. The warm weather during fruit-bloom caused the rearing of large quantities of brood, and now there is no honey to gather, and it looks at present as though there would be none from white clover. Possibly there will be some from Alsike and basswood."

"Starvation in June," I soliloquized; "who ever heard tell of the like?" Within two or three days I met with a bee-keeper who told me he was losing some of his weak colonies by starvation. Feeding in the fall, he said, might be thought of, but feeding at midsummer was out of the question.

In 30 years' experience as a bee-keeper, I have never known such a dearth of honey in the season of the honey harvest as there is now in many parts of Canadian beedom, my own locality included. It is chiefly caused by the terrible drought, which has continued, almost unrelieved by a single shower, for about six weeks. White clover when it appeared, had a very stunted look, and seemed to be devoid of nectar, for the bees did not visit it at all. The same may be said of Alsike clover. The only flower I have noticed the bees frequenting is the viper's bugloss, and they are by no means numerous on it. A long stalk of blue bloom will have perhaps one or two bees on it—not more. I have never considered this "vile weed," as Dr. Darlington calls it in his "American Weeds and Useful Plants," a very fruitful source of honey supply, and I do not think it is doing much to mitigate the effects of the terrible drought as I have, I think, truthfully called it, under which we are now suffering.

In a few days the Canada thistle, as it is slanderously termed, will be in bloom. It is no more the Canada thistle than it is the United States thistle, having been imported into both countries from the continent of Europe. This vilest of vile weeds has the one redeeming feature that it yields honey of an excellent quality. I am curious to know whether it will prove itself drought-proof, and yield its usual quota of nectar this year.

From the editorial paragraph in the Review, it seems they have basswood expectations in Michigan. We have none here, whatever. A new crop of leaves has hidden the blackened remains of the first leafing-out, but buds and blossoms there are none.

The drought is local, but I am inclined to think extends over a large portion of Canadian beedom. There have been abundant rains within a few miles of me in various directions, and I am inclined to think that many districts of country will give their usual favorable returns of the honey harvest. But, in some sections, the summer losses will exceed those of the past winter, though it was an exceptionally severe one.

Experiments in Wintering Bees.

In the Bee-Keepers' Review for June, a series of experiments is reported by Mr. R. L. Taylor, which furnishes much food for thought. A lot of 37 colonies was weighed according to several characteristics. The average strength of the whole number was 6.59; average fall weight, 53.52 lbs.; average spring weight, 42.20 lbs.; average consumption, 11.32 lbs.; average consumption per unit of strength, 1.72 lbs. In four tables the classification is according to the absence and to the different degrees of the voiding of excrement. One table includes those which showed none of these signs. The amount consumed by the bees in this class was 1.57 lbs. per unit of strength. Ten colonies that showed signs of excrementitious matter in the smallest degree consumed 1.75 lbs. per unit of strength. Seven colonies that showed the existence of diarrhea to a moderate extent, consumed 1.84 lbs. per unit of strength. Three colonies that showed much voiding of excrement consumed 2.11 lbs. per unit of strength. It will thus be seen that the amount of stores consumed increases steadily with the evidence of a deposit of excrement. Whether the too great consumption of food caused the voiding of excrement, or whether the conditions leading to the voiding caused the consumption, or whether some other condition, such as moisture, was the cause of both, does not appear from these experiments, but will be enquired into later on.

It is to be regretted that no colonies wintered exclusively on sugar stores figure in these experiments. These experiments do little more than confirm the importance of quietude and freedom from uneasiness as necessary to the best wintering of bees.

Some experiments in upward ventilation lead Mr. Taylor to the conclusion that upward ventilation tends to increase the accumulation of feces, and also to decrease the strength of the colony, the reason probably being that an upward movement of the air disquiets the bees and causes a larger proportion than otherwise would to leave the cluster and perish.

The six strongest colonies in the lot of 37, consumed stores in the proportion of 1.34 to the unit of strength. The five weakest consumed no less than 2.37 lbs. per unit of strength. This result backs up Father Langstroth's old-time advice published in capital letters: "KEEP ALL COLONIES STRONG."

Mr. Taylor's summing up of this series of experiments is as follows:

"These results are not particularly surprising, perhaps, for more heat comparatively would be lost from a weak colony, and this loss must be made good by increased consumption, but having these results in mind and selecting and comparing the colonies heaviest in stores with those lightest in that respect, one would be apt to be somewhat surprised, for the division appears to be upon much the same lines as in the last two tables, since in many cases the heaviest colonies are strongest, and the lightest weakest. I selected the 12 heaviest, one weighing without its bottom-board more than 60 pounds when put into the cellar, and I found their average strength 7.75, average fall weight 63.46, average consumption 14.33 lbs., and the consumption per unit of strength 1.85 lbs. The nine lighter ones had an average strength of 5.11, average fall weight of 41 lbs., and an average consumption of 7.93 lbs., and the consumption per unit of strength 1.55 lbs., the consumption of the heaviest being in excess by more than 19 per cent. These results suggest that a great surplusage of stores causes unnecessary consumption, and it might be suspected that there had been an overestimation of the strength of the lighter colonies, but a careful comparison with the results in tables G and H, where the suggestion would be that the weaker ones had been underestimated, would have a tendency to remove that suspicion. These results and these tables in reality seem to emphasize—in fact to prove each other."

We appear to be still in the fog as to the means whereby the consumption of stores can be reduced to a minimum without weakening the colony. All bee-keepers of any considerable experience have occasionally been surprised at the small quantity of stores on which a colony has wintered. If Mr. Taylor could ascertain by a course of experimentation how to winter bees on the smallest possible consumption of stores, he would earn the warmest thanks of bee-keepers generally.

The Viper's Bugloss.

Since writing the article on "Summer Losses" I have been ransacking my somewhat limited library for information about this plant, and find very little. The botanical species to which it belongs is called *Echium* from *Echis*, a viper, from the resemblance of the seeds to a viper's head. What the word "bugloss" imports, I have not been able to make out. The kind that grows as a weed is known as *Echium vulgare*. Zell's Cyclopedia says of it: "A rough plant, with large, handsome, violet-colored flowers, found in fields and waste grounds." It is deemed worthy of a place in the "Cottage Gardeners' Dictionary," a valuable English publication, and ranks among plants grown in hot-houses. "American Weeds and Useful Plants" is very severe on it, not only stigmatizing it as a "vile weed," but as a sad pest wherever it establishes itself. I cannot for the life of me see anything execrable about it. There is no difficulty in exterminating it, if one desires to do so. It is evidently a very hardy plant, and has the faculty of flourishing in barren soils and desolate places, which is a great virtue if it is worth anything for bee-forage. That is the kind of plant bee-keepers should encourage—one that will clothe waste-places with verdure, and without taking up land that may be devoted to valuable crops, make desert places fruitful to some extent. I would like to ask whether any reader of the American Bee Journal knows anything about the value, or otherwise, of this plant for honey-production. If it is worth anything to the bee-keeper, it is easy of multiplication, as it will grow both from seeds and cuttings.

The American Bee Journal
ESTABLISHED IN 1861
OLDEST BEE-PAPER IN AMERICA

George W. York, - - Editor.

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Editorial Budget.

Dr. Gallup, of Santa Ana, Calif., has sent me two photographic views of his beautiful home. One picture shows a neat eucalyptus grove, which, Dr. G. says, "speaks louder than words of the marvelous growth of trees and vines in our land of perpetual summer." He wrote July 3, that Hon. J. M. Hambaugh and family had arrived in Southern California from Illinois—"the result of his coming to see California for himself." I'm afraid Dr. Gallup has "fallen in love" with the Golden State. But I don't blame him any for it. It must be a good place, or Prof. Cook wouldn't have gone back there to live and labor.

Many thanks for the nice pictures, Dr. Some day I hope to meet and greet you in your earthly "summerland," with its streams of honey and good-will.

Label Gum or Mucilage.—In a foreign bee-paper is found this recipe for making a gum for sticking labels on glass, and most likely it would be successfully used in fastening them on any kind of surface:

Take white of an egg and beat it into a froth; allow this to settle, and with a camel's-hair brush apply the liquid to the back of the label. This is afterward pressed on the glass by means of a clean cloth. This gum resists damp very well.

Honey Crop Reports for 1895 are somewhat various. They range all the way from "bees starving" to what Editor Leahy said in the July Progressive, about the honey-flow at Higginsville, Mo., viz.: "Never for years have we had such a honey-flow as has been this season."

While I sincerely wish that every bee-keeper in the land might have a satisfactory honey crop this year, still I agree with the writer of a sentiment I read a few days ago, that bee-keepers should not be discouraged as might reasonably be the farmer when he meets with crop failure, for the latter then has his outlay of much preparatory labor and often large financial investment in land all for nothing, while the bee-keeper frequently has but little money invested, and when there is no honey crop there is also less work to be done in the apiary. Also, the majority of bee-keepers do not depend alone upon the bees, so that if a honey failure does come they go on as before with their other labor, and though the bees do not invariably bring them a profit, they also do not cause severe loss or inconvenience.

I trust that no one will be discouraged, but press onward in the apicultural race, possessing the assurance that some day their turn will come to receive the blessing of an abundant honey harvest.

The North American Convention will meet in Toronto, Ont., Canada, Sept. 4, 5 and 6—less than two months from now. The sessions will be held in the auditorium of the Normal School, and all the necessary arrangements are being rapidly completed. The prospects are that there will be reduced rates from the Atlantic to the Mississippi, at least, and it is hoped that our Western friends may also be provided for with a reduction in transportation expenses.

The Executive Committee is working on the program, which is sure to be a good one. Secretary Hutchinson is in such close touch with the whole field of apicultural ability, that if a splendid feast is not furnished, those who attend will know whom to blame. It is a settled thing that our Canadian brethren (and "sisteren") will strain every nerve (and almost break their backs) to make the coming convention the finest and largest ever held by the Association. And they'll do it. They know how.

I would very much like to attend, but whether I can go or not, I hope everybody else will be there to enjoy the "feast of reason and flow of soul" that is being stored up for the occasion.

As soon as a definite program and arrangements are completed, they will be published so that all may know what to expect.

"Observer"—who does the observing for the Progressive Bee-Keeper—observes that it would not be well for the North American and the Bee-Keepers' Union to form any "matrimonial alliance." He says: "Don't do it. The Union has done noble work as it is. Better let well enough alone in this case. I will let abler writers than I say if I am not right." Maybe "Observer" can see the "end from the beginning," and "feels it in his bones" that there might be a divorce called for some day in case the "wedding" is consummated. Personally, I favor making "one" of the twain, as both are old enough and sensible enough to live peaceably together. Besides, "In union there is strength."

White Clover seems to have been a failure again this year in most localities, but the basswood gave promise of an abundant yield in many parts of the country. Gleanings for July 1 had this to say about the honey prospects:

Basswoods are blooming beautifully; and the frequent and warm rains that we are now having give promise of an abundant honey-flow from that source. Letters go to show that white clover has been largely a failure almost everywhere. If any one has secured a fine crop of white clover honey, let him hold up his hand. There is going to be a crop of honey in California; but, as Rambler says, it will not be such a very large one after all.

The Progressive Bee-Keeper sports an illustrated calendar at the head of its editorial page each month. A portion of the artistic design in the July number suggests a St. Joseph, Mo., "variety show" or "musee" I once heard Bro. A. I. Root and Dr. Miller endeavor to describe. May be the Progressive is helping to boom one of "St. Joe's" industries, on the score of State pride! I think Rev. E. T. Abbott will have to give our Progressive friends a "short sermon," though if it be as "short" as "Sweet Marie's" frock, shown in the July calendar, it can hardly be called a "sermon."

Bee-Paralysis.—In reply to a question from a subscriber, as to the symptoms and treatment of bee-paralysis, Mr. Roberts, of Alderman & Roberts, writes thus:

The symptoms of bee-paralysis, or "nameless bee-disease," are, first, a shiny black color, then swollen abdomens, sluggish movements and quivering of wings. The remedy given on page 364 should be applied every week. I seldom have to use more than two applications. J. B. ROBERTS.
Wewahitchka, Fla.

Prof. Cook and Entomology.—The following announcement has come into my hands. All who can do so, should avail themselves of its offers :

IMPORTANT TO FRUIT-GROWERS. — Every fruit-grower should have some knowledge of *insects ;* should know his *friends* from his *enemies*, and the methods whereby the latter may be conquered. Under competent instruction this knowledge may be gained in a few weeks. Alive to this fact, an arrangement has been made with Prof. A. J. Cook, of Pomona College, to give a course of instruction in entomology, to continue four weeks from July 15, 1895, at Long Beach, Calif., in connection with the Chautauqua Assembly. Prof. Cook has had long and successful experience in such work, and will make the instruction very practical and valuable.

Long Beach is one of the pleasantest and most inexpensive of all the Pacific Coast seaside resorts. The Chautauqua Assembly also makes it still more desirable as a place to rest, recreate and gain valuable instruction. Courses will also be given in Physiology, Botany and Marine Zoology. In each course diagrams, models, and microscopes will greatly aid in the study of the real plants and animals. The modern laboratory method will be used exclusively, so that the work will be fascinating as well as improving.

TERMS.—$6.00 per course ; or $5.00 in case the student holds a Chautauqua ticket. Instruction for the 10 days of the regular Chautauqua work will be only one-half the above rates.

For further information apply to Prof. A. J. Cook, Pomona College, Claremont, Calif.

A Spirit of Jealousy probably inspired a good deal of the adverse criticism or fault-finding concerning what a few imaginative bee-people are pleased to call a "mutual admiration society" among bee-keepers. If those who do not like to hear others well spoken of unless they can share in it, would turn in and do or say something really meritorious themselves, perhaps they might win at least a few words of just commendation. Surely, by so doing they would make themselves happier, as well as others. Sensible people soon "spot" the chronic croakers, and then—why, just let 'em croak !

A Migratory Bee-Keeper is now found in Michigan in the person of J. A. Pearce, of Kalamazoo. The Frankfort, Mich., "Express," published in Benzie county, recently printed this item :

BEES IN BENZIE COUNTY.—Last weak J. A. Pearce brought in a carload of bees from Kent county. He states that the snowless winters and dry summers have destroyed the white clover and other foliage plants to such an extent that there will be little or no honey produced in that locality. His apiary is located just up the river valley from Frankfort, where he reports his bees doing finely. We often hear some of our people lamenting about the deep snow and its staying on so long. He says if Kent county could have our snow and have it remain as it does here, it would be worth hundreds of thousands of dollars to them. Do not kick on the snow.

The Anti-Honey-Adulteration Law of California has been referred to in these columns several times recently. Mr. C. H. Clayton, of Lang, Calif., on July 1, wrote me as follows concerning it :

Referring to the editorial on page 412, "Against Honey Adulteration," I take the liberty to send you a copy of our law on the subject. I think it will prove of interest to all the readers of the Bee Journal. There was another anti-adulteration law passed at the same session of the legislature, which embraces in its terms *all* articles of *food* and *drink*.

C. H. CLAYTON.

The "copy" of the law kindly sent by Mr. Clayton, reads thus :

CHAPTER CIV.—An Act to prevent the sale of imitation or adulterated honey, and to provide a punishment therefor. (Approved March 26, 1895.)

SECTION 1. Any person who, by himself or an agent, sells or offers for sale, or in any way disposes of, any substance or composition of the appearance of honey, or which in color, consistency, and taste resembles honey, but is not honey—the natural product of the bee, or a pure extract therefrom—upon the representation or claim or pretense that the same is honey, or a pure extract therefrom, is guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of one hundred dollars, or by imprisonment in the county jail for three months, or by both such fine and imprisonment.

SEC. 2. For the purposes of this Act, "pure extract of honey" is honey extracted from the comb without the addition of any other substances.

SEC. 3. This Act shall take effect and be in force from and after its passage.

Now if the California authorities will see to it that the above law is strictly enforced, the adulteration of honey in that State may soon be a thing of the past. Other States would do well to have a similar law enacted, then, with proper enforcement of them all, the conscienceless adulterators of honey would soon be driven out of their nefarious business.

Foul Brood seems to make itself felt in various localities this summer. Quite a number of subscribers to the Bee Journal have sent in descriptions of what they fear is the dread disease, and desire directions for its treatment and eradication. This has been published so many times in the Bee Journal, that it seems almost useless to go all over the subject again when about all that is known in regard to it is to be found in the three pamphlets by Dr. Howard, Prof. Cheshire and Mr. Kohnke. The first named contains Mr. McEvoy's treatment and a review of the work of others in their experiments with foul brood and its treatment. The combined price of the three pamphlets is 60 cents, or 50 cents when all are taken at one time. Every bee-keeper should have them, so as to be able to spot the disease upon its first appearance. The pamphlets can be ordered from this office.

In speaking of this matter in last Gleanings, Editor Root says :

I think it greatly behooves all intelligent and progressive bee-keepers, when they know of cases of foul brood, to offer, if need be, the owner of the infested stock their services, and furnish them foundation, frames, and a new hive.

By a little effort on the part of bee-keepers who keep themselves well informed, they may be able to avert disaster to their own apiary, by aiding an unfortunate neighbor whose bees may have the disease and their owner unable to cure it.

Among the Bee-Papers

Gleaned by Dr. Miller.

CLIPPING QUEENS' WINGS.

In nearly every apiary, where the manager can or is expected to be present during the swarming season, I should advise the clipping of all laying queens in the apiary ; in fact, I should as soon think of going back to box-hives as to the managing of an apiary where the queens have wings so they could fly out with the swarm, where I was working the same for comb honey. I said, "in *nearly* every apiary." Why I said this was, there are a very few localities in the United States where ants are so thick on the ground, and about the hives, that it would not be safe to allow the queens to be out on the ground for any length of time, else they would be killed by these same ants. But as such a place or places are rare exceptions, it would be safe to say that I would always clip the wings of all queens in the apiary as soon as laying.—DOOLITTLE, in Gleanings.

NEW VS. OLD METHODS OF REARING CELLS.

We have something over 250 queen-rearing colonies in our home yard. After having tried very faithfully all the later methods, such as artificial cell-cups, rearing cells in the upper story of a strong colony having a queen in the lower story separated by a perforated zinc, and all such new methods, we have gone back to the good old ways. The artificial cell-cups are too expensive to make—at least, for us ; too ex-

pensive to put in royal jelly and larvæ; and then, worse than all, we find that too large a percentage of them are rejected. Completing the cells in the upper story of a strong colony with a queen below, works *sometimes*, and sometimes not. The uncertainty of the plan has caused us to abandon it for a good strong colony of *queenless* bees. We save all our cell-cups, and cells from first-class breeders, and put the frame or frames containing them into the queenless colony or colonies on hand for that purpose. There is thus a certainty of results; and where we are selling as many queens as we now are, we always have quite a number of partially completed cells from choice breeders that have been sold out a few days previously. By this plan our cells really cost us nothing, any more than the time of taking out the frames with the cells thereon, and putting them into one or two special queenless colonies, by them to be completed.—Gleanings.

EXPERIMENTER TAYLOR'S REPORTS.

The editor of Gleanings owns up that he can't always readily get the exact bearing on the tables and reports of the experiments at the Michigan station as given in Review, and hints that he would like to have Mr. Taylor give more distinctly his views as to the lessons to be learned, saying, "Surely Mr. Taylor can interpret his own figures more correctly."

It's quite a compliment to bee-keepers, as well as an indication of his own fairness, that Mr. Taylor is willing to set before us tables of facts with very little comment, as if to say: "There are the facts, gentlemen; you are intelligent enough to make proper use of them; just help yourselves to the facts, and draw whatever conclusions you like." Yes, Brother Taylor, we're a smart lot—don't think for a minute we need any help from you; but, then, if you don't mind, just do the same as though we weren't so smart, and say over the lessons we're to learn from those tables.

SWEET CLOVER FOR FORAGE AND HONEY.

Gleanings has always been conservative on the matter of sweet clover, or at least has been rather quiet, but now comes out in the following enthusiastic style:

"There is no better honey in the world than that from sweet clover, and there is no plant that I have ever found that would grow with such thrift and vigor on the poorest, hardest, unfertilized and uncultivated roadside. Besides all that, it is a valuable forage-plant. We cut it for our horses, and they eat it with more avidity now, since they have learned how, than anything else in the line of green feed or cured hay. Some people call it a weed; but it is an exceedingly *valuable* weed. Let your stock get used to it and they will eat up every bit of it, even the hard and dry seed stalks. I believe it succeeds rather better on hard, dry clay, or gravelly clay, than on sandy soil, for I never saw any of it in Florida—that is, to amount to anything."

WAS LANGSTROTH THE INVENTOR OF THE MOVABLE-FRAME HIVE?

An item is copied in Gleanings trying to show that Langstroth is not entitled to the credit he receives as an inventor. The editor is inclined to credit the item to the pen of C. J. Robinson, a pretty safe guess to make, as Mr. Robinson is perhaps the only man living so pitifully destitute of fairness as to want to pluck from the brow of Father Langstroth his well-earned laurels. The sad feature in the case is that papers are so ignorant on such matters as to be willing to print what Mr. Robinson says. Gleanings says: "Such kind of writing at this time is in keeping with the claims of those who say Columbus did not discover America simply because he found men here when he landed, so the natives must have been ahead of him."

A SWARM-HIVER.

B. Taylor illustrates in Gleanings a bee-hiver that he thinks will work as well as any that can be made, and then bluntly says he doesn't think it or any other swarm-hiver is of practical value to the honey-producer working for profit.

WHAT ONE COLONY DID.

A colony in a 10-frame hive stored 237 lbs. in 2-lb. sections—not by guess, but by actual weight. This is the largest yield I ever got from a single colony. I also made four new colonies from this one, and had them in first-class condition for winter. It was done in this way: This colony, which was a very strong one, got the swarming-fever just at the beginning of the white clover flow. I did not wait for them to swarm, but removed all their brood, and gave them frames with only narrow starters of foundation in them. Now, I believe that according to theory, a colony thus treated should not store any or work in sections until the brood-nest is full. But in actual practice a colony thus treated will, if the super is put on with one or two bait-sections, and the rest filled with full sheets of foundation, go to work in them at once—that is, in a good flow. I took those frames of brood with but very few bees on them, and divided them up into four hives; and as soon as a few bees in each hive had hatched, I gave them a laying queen, and then built them up by feeding and giving them frames with full sheets of foundation as fast as they could use them. At this time of the year it is warm, and no danger of robbing, and they will build up faster than one would suppose.—C. DAVENPORT, of Southern Minnesota, in Gleanings.

WIDE TOP-BARS IN DOUBLE-BROOD-NEST HIVES.

An editorial in Gleanings says experiments show that queens are loth to go back and forth from one chamber to the other, the editor saying: "I feel more convinced than ever that wide top-bars for double brood-nests are not the thing ....I cannot but feel that the slightest barrier through the center of the brood-nest is somewhat of an obstruction, and a waste of brood-space. The narrower this barrier or top-bar, the less the obstruction." But he thinks wide and deep top-bars are no hindrance to the worker-bees.

EUCALYPTUS HONEY IN AUSTRALIA.

"Honey from box is generally considered the best, though that from iron-bark, shiny-bark, and some of the gums is excellent."

"*Not a single variety of eucalyptus yields a honey that has what is known as the eucalyptus flavor.* A few years back some bright genius mixed a small quantity of *eucalyptus extract* into a quantity of honey, and tried to sell it in England as Australian honey for its medicinal properties. Of course, it was unfit for the table, and of course it gave Australian honey a bad name. It would have been all right if sold as a medicine, and labeled 'Eucalyptus *and* Honey.'"

"Eucalyptus extract is a volatile oil, double-distilled from, I believe, the blue-gum only, though I have no doubt it could be obtained from other eucalypti. It is used here very largely in the treatment of colds, sore throats, etc."—J. D. WARD, in Gleanings.

EXTRA COMBS IN SPRING.

Emma Wilson says in Gleanings: "We have decided most emphatically that eight frames are not enough for some of our queens, as some of our strongest colonies have 10 and 11 frames of brood. In the spring, as soon as a colony gets pretty strong, say with about five frames of brood, we put an extra story of brood-combs under the colony. We have two objects in view in doing this. First, if the queen feels crowded and wants more room, she can enlarge the brood-nest at her pleasure. Second, the combs are nicely taken care of by the bees, and, if not needed, no harm is done.

"We hoped that, by giving our strong colonies that extra story of combs under, it would do away with the swarming-fever; but I am sorry to say I cannot see that it makes much difference. Nearly always we find queen-cells in these colonies first, not because of the extra stories, but because they are the strongest colonies. Now, we know that the Dadants have little or no swarming because they use large hives and give the queen plenty of room. What's the trouble with our colonies? Are not 16 frames enough for the queen? That's more room than the Dadants give. Is it because they are in two stories? The queen seems to go readily from one story to another, and we find five and six frames of brood in each story, and queen-cells started. What's the trouble?"

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

Honey as Food and Medicine.—A new and revised edition of this 32-page pamphlet is now issued. It has 5 blank pages on which to write or paste recipes taken from other sources. It is just what its name indicates, and should be liberally distributed among the people everywhere to create a demand for honey. It contains a number of recipes on the use of honey as food and as medicine, besides much other interesting and valuable information. Prices, postpaid, are: Single copy, 5 cts.; 10 copies 35 cts.; 50 for $1.50; 100 for $2.50. Better give them a trial. Send all orders to the Bee Journal office.

Biggest Premium We Ever Offered!

THE BEE-KEEPER'S GUIDE:

—OR—

MANUAL OF THE APIARY.

—BY—

PROF. A. J. COOK.

This 15th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without "THE BEE-KEEPER'S GUIDE."

HERE IS OUR GRAND OFFER:

Send us **Two New Subscribers** to the Bee Journal (with $2.00), and we will mail YOU a copy of Prof. Cook's book FREE as a premium. No premium is also given to the new subscribers, under this offer. The postpaid price of the book alone is $1.25, or we club it with the Bee Journal for a year—both together for $1.75. But surely anybody can get only two new subscribers to the Bee Journal for a year, and thus get the book as a premium. Let everybody try for it. We want to give away 1000 copies of this book by Oct. 1. Will YOU have one?

GEORGE W. YORK & CO., 56 Fifth Ave., CHICAGO, ILLS.

A NEW DEPARTURE!

$.50 **F. A. LOCKHART & CO.** $.50

Have concluded to let every NEW CUSTOMER have one of those hardy, gentle, prolific Northern-bred Queens—untested, either **Gray Carniolans** or **Golden Italians,** for 50 cents. Don't fail to try our Carniolans. They are a wonderful race of Bees, superior to all others in many ways. We never saw foul brood or bee-paralysis. Untested Queen, 75c.; 6 for $4. *Descriptive Price-List Free.*

F. A. LOCKHART & CO., LAKE GEORGE, N. Y.

27D2t ☞ Be sure to mention the American Bee Journal when you write.

Convention Notices.

CALIFORNIA.—The next meeting of the Tulare County Bee-Keepers' Association will be held in Visalia, Aug. 14, 1895. All interested are invited. J. E. YOUNG, Sec.
Visalia, Calif.

TEXAS.—The Texas State Bee-Keepers' Association will meet at Greenville, Tex., Aug. 21 and 22, 1895. Good premiums are offered for best exhibits. All are invited to attend.
Deport, Tex. W. H. WHITE, Sec.

TENNESSEE.—The next annual meeting of the East Tennessee Bee-Keepers' Association will be held at Mulberry Gap, Tenn., on August 16, 1895. The members are urged to attend and all bee-keepers are invited to be present. H. F COLEMAN, Sec.
Sneedville, Tenn.

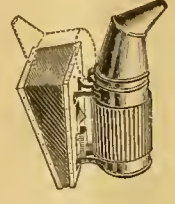
Wants or Exchanges.

This department is only for your "Wants" or bona-fide "Exchanges," and such will be inserted here **at 10 cents a line** for each time, when specially ordered into this department. Exchanges for cash or for price-lists, or notices offering articles for sale, will not be inserted here—such belong in the regular advertising columns, at regular rates.

TO EXCHANGE—Bees and Queens for an Organ. F. C. MORROW.
27Att Wallaceburg, Ark.

TO EXCHANGE—Lossing's "Civil War in America" (3 vols.), for Honey. Address, J. C. YORK, Alliance, Ohio.

The 1895 Crane Smoker, made by The A. I. Root Co., of Medina, Ohio, is a good one. I have been trying it this year, and it exactly "fills the bill." Oh, what a smoke it gives out! It holds fire



well, too, and has a powerful blast. Among the many other excellent implements used in a well-equipped apiary, I doubt if there is any that is so nearly perfect as the smokers of to-day. And the Crane "gets there." Price, by express, 1.50; by mail, $1.85.

Binders for this size of the American Bee Journal we can furnish for 75 cents each, postpaid; or we will club it with the Bee Journal for a year—both for $1.60. We have a few of the old size (6x9) Binders left, that we will mail for only 40 cents each, to close them out.

A Grand Bee-Smoker is the one offered by W. C. R. Kemp, Orleans, Orange Co., Ind. It has a 3-inch fire-barrel, burns all kinds of fuel, and is simple, efficient and durable. Send 100 cents for a sample smoker, and you will have a rare bargain.

General Items.

Bees Did Fairly Well.

Bees here have done fairly well—marvelously for such a season.
T. F. BINGHAM.
Abronia, Mich., July 1.

Good Prospects for Honey.

Prospects are very good now for honey. We have had quite a rain for the last 36 hours, which will cheer up everybody, and the bees, too. J. C. KNOLL.
Glenwood, Nebr., June 28.

Busy on the Basswood.

I keep 100 colonies of bees. I had heavy loss last winter, but I have still a very good number. They are very busy on basswood; they commenced gathering honey June 15.
Quebec, Canada, June 27. M. GAGNE.

Satisfied with Bee-Keeping.

We cannot get along without the American Bee Journal. We have succeeded very well in bee-keeping during the last few years. My apiary now numbers 200 colonies. Last year we sold about $250 worth of honey, and expect to double the amount this year. G. A. CREASY.
Mt. Airy, Va., July 1.

Taking a Fine Crop of Honey.

We are taking a very fine crop of honey this season. Although 50 per cent. of our bees perished last year, in consequence of the great drouth, they have already more than made up in increase this year. The prospect for honey in Southern California for the future is booming.
S. B. KIMMELL.
Diamente, Calif., July 2.

Drone-Trap—Good Results in 1894.

I have a new trap—one of my own make. It is not like any old one that I have seen. This one will catch drones as well when they get out as when the trap is put on before they get out. It will catch them going out or going in. My papa has 76 colonies of bees, and some of them stored 100 pounds of comb honey last year, while all of the reports I saw from this State said "no honey." We have taken the "old reliable" Bee Journal for five or six years, and like it very much. J. H. DITSON.
Hutton Valley, Mo., June 21.

A Bee-Woman's Report.

Every time I read the Bee Journal I feel like writing something about my bees, or asking some questions. There is no one else in our town that keeps bees. Some have tried, but they do not succeed, because they know nothing about them. I love my bees, and take the greatest interest in them. I began with one colony, bought "A B C of Bee-Culture," and would read and then go and look at my bees. I would read about them every day, and look at the bees every few days, until I became acquainted with them, and could understand what I was reading about.

The second year I had three colonies to start the season with, and from them two swarms issued. I got no surplus honey that year that was good; the few pounds I did get was so poor we could not eat it—it had a sour, bitter taste.

The third year I had five colonies to start with; I had five swarms, making 10 colonies of bees, and I took 392 pounds of honey. I think that did very well considering my experience and the location. I live within five miles of the heart of Cincin-

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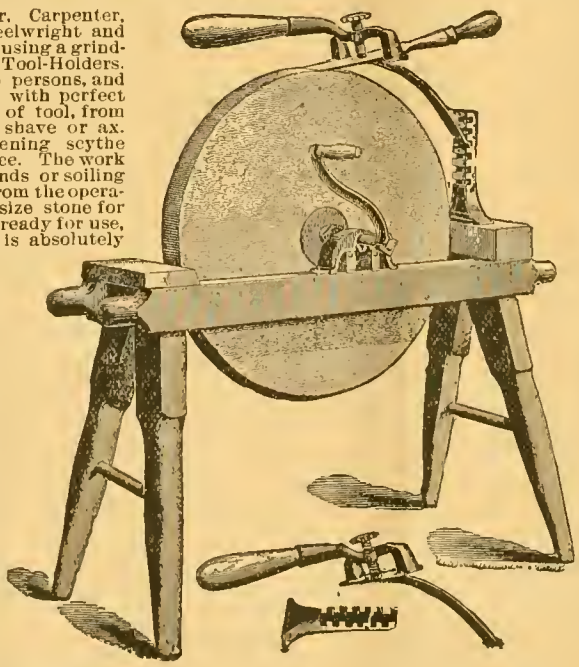

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nati, and in the center of a little town of 8,000, so you see my bees have to go some little distance to pasture. White clover does not yield much if any honey around here. What the bees get is principally from sweet clover. I got no honey at all last year, but hope for better things this year. MRS. G. S. STEVENS.
Norwood, Ohio, May 18.

Bees Doing Well.

Bees are doing well in this locality.
C. C. PARSONS.
Bessemer, Ala., June 25.

Basswood Killed by Frost.

The frost killed all the basswood in this part of the State, so we shall have a very short honey season at best. We are now in the very best of the bloom, and it is cold and wet. M. F. CRAM.
W. Brookfield, Vt., June 25.

Flax Does Yield Honey.

I see the question in the American Bee Journal—"Does flax yield honey, and do bees gather it ? I am in a flax country, and grow it myself extensively. Seeing this question, I looked through my flax and found it booming with bees. I examined the honey-sac of one bee and found it well filled with clear nectar, so I would say flax does yield honey, and that bees gather it.
ALEX. SMITH.
Hill's Green, Ont., June 29.

Clover a Total Failure—Flax.

I never saw clover bloom better than it has here, but it was too dry for it to yield nectar. There is about 100 acres of Alsike within one mile of my bees. If it rains in July I will get some fall honey yet.

I see on page 394 M. R. asking if flax yields honey. Flax yields both honey and pollen in some seasons; the pollen is blue, and the honey is dark and of peculiar flavor.
Rickel, Ill., June 25. JACOB WIRTH.

Sulphur for Paralysis—Red Clover.

Last spring I had two colonies that were badly affected with bee-paralysis, there being as much as a quart of dead bees in front of each hive. About that time I saw the sulphur cure mentioned in the Bee Journal. I procured the powdered sulphur, put it in a pepper-box, and opened the hives and sifted the sulphur between the frames and over the top-bars, and in less than one week there was not a diseased bee in either colony, and there is none at this time.

There is but little white clover here, and basswood bloom is all frozen. Bees are working on red clover, and doing reasonably well. N. W. SHULTZ.
Shreve, Ohio, July 2.

Bees, Losses, Prospects, Etc.

Since spring really opened and came off favorable, bees had been doing exceedingly well in this section up to May 13, when we had a real freeze here, and in the surrounding country. Since then bees have been nearly at a stand still, as all blossoms that were out at that time were wholly destroyed or badly damaged; in fact, we had several frosts and freezes right along. Fruit was nearly all destroyed; clover and grasses badly damaged by the cold, and now are badly dried up by the severe drouth. So our only hope, and the poor bees' only chance, are the white daisies, which are abundant here, and I notice the bees are gathering honey quite fast just now from that source; but the daisies will soon fail unless we get rain very soon, for it is getting exceedingly dry here.

Those of us who succeeded in wintering our bees with but very little loss, have been somewhat fortunate in one respect at least,

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while those who lost so heavily in bees last winter and spring, and were ready to buy, we had them to sell. One man who had lost about 200 colonies out of 225, purchased 50 from a neighbor not far from me. Another man who had lost 100 out of 130 colonies, purchased 50 of me. One year ago I sold 34 colonies, two years ago 77. Others lost, but not so heavily perhaps. They live north of us, and some miles away.

The prospect for bees here is very discouraging. No white honey will be stored, and not much else, judging from present prospects. H. F. NEWTON.

Whitney's Crossing, N. Y., June 19.

Flax—Burnt Sugar.

Answer to M. R., on page 394: Three years ago we had 40 acres of flax, and although I paid special attention to it, I never saw as much as a single bee at work on the blossoms, although quite a considerable number of wasps and butterflies could be seen at work at all times of the day.

To J. W. P. (same page): I rather suspect that you have been feeding your bees on *very badly* burnt sugar. At least the facts you mention give me that impression. Please tell us how you feed sugar to bees. Burnt sugar may not prove disastrous to bees when they have honey in addition, but when fed alone it is sure death.

Chester Oak, Iowa. BERT LOWNES.

Bees and Strawberries, Etc.

I have been much amused at the various writers in the Bee Journal in regard to bees and strawberries. I want to say that my bees work on them day after day when in bloom. Also I want to say contrary to what some of the *big* writers say—they say bees work on only one kind of flowers at one time or load; I have frequently seen them visit three or four different flowers at one trip or load. I can now see them go from hollyhock to mustard, and then to catnip.

Bees have been swarming for six weeks, and some have nearly 30 pounds of surplus honey. Some of mine made $12 worth last year. W. A. DITSON.

Hutton Valley, Mo., June 22.

No Nectar in the Flowers.

Bees are very strong, lying out all over the front of the hives. They are not swarming, nor are they working in the supers, although they seem to be working very busily, but don't seem to store any surplus honey. What can the matter be? I have over 60 colonies, but I don't think I will have 200 pounds of honey this season, if any at all. Some of my brother bee-keepers have not put on the supers yet. Is the fault in the season? Is there no honey in the flowers this season? It has been very warm and dry here. Clover has not been very abundant here this season.

I have found the American Bee Journal a great help to me in the last year, and hope to find it to be so in the future.

GEO. H. ADKINS.

Street Road, N. Y., June 26.

The Season in Iowa.

My 60 colonies of bees came through the winter all right, without the loss of one. I took them out of the cellar about the first of April—they were then clean and dry. They are in the tight-bottom hives, and when I put them into the cellar last November, I took off the covers and turned back a part of the front end of the quilt or enamel cloth, then laid two strips of boards across, and placed another hive on top. This gave them plenty of upward ventilation, and yet not directly through the cluster.

They built up quite fast on willow and dandelion bloom, but white clover seems to be a failure again; there is some that is in full bloom in low places, but bees do not seem to work on it. Basswood will be a

partial failure along the river bottoms, and in deep hollows where most of the large trees grow. The buds were all killed by the frost the forepart of May; but on the hillsides and high ground there is quite a good deal that was not injured by the frost, and the buds are now just commencing to burst open. Crops of all kinds look well except grass and clover. N. YOUNG.

Ackley, Iowa, June 24.

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CHICAGO, ILL., June 7.—We have our usual dull season which we look forward to and expect. Honey is entirely forgotten during the months of June, July and August. The market is pretty well gleaned up of all grades of honey, so the prospects are encouraging for the coming season. We are getting 13@14c. for light comb. J. A. L.

CHICAGO, ILL., May 23.—The trade in comb honey is very light at this time of the year—as it is between seasons. Soon we will get the new crop, and it will come on a bare market. Just now what little comb sells brings 14c. for the best grades. Extracted, 5½@7c. All good grades of beeswax, 30c.
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PHILADELPHIA, PA., June 18.—The new crop of comb honey is arriving slowly, and is in fair demand. No new extracted honey has arrived in this market as yet. We quote: Comb honey, 9@13c. Extracted, 4½@6c.
Beeswax is still declining. The adulteration of beeswax has demoralized our market this spring, and has hurt our sales considerable. Price, 25@27c. W. A. S.

NEW YORK, N. Y., July 6.—The market is about bare of comb honey and there is no demand at the present. The market is quiet on extracted. Demand is limited, with plenty of supply arriving to meet the demands and more. We quote: California, 6@6½c.; Southern, choice, 60@65c. per gallon; common, 50@55c. per gallon. Beeswax is declining and selling at from 29@30c. at present, but the indications are that the price will decline still further. H. B. & S.

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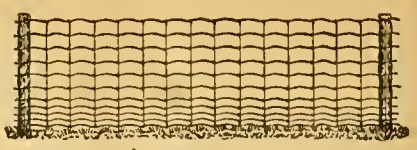

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Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

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Cincinnati, July 9, 1895.

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24Atf STEELEVILLE, Randolph Co., ILL.

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Working Wax into Foundation by the lb. **a Specialty.** I can make it an object for you in any quantity, but offer special inducements on straight 25 or 50 lb. lots. Or for making large lot of Wax into Foundation. I am furnishing large Dealers, and can also please you. **Beeswax taken at all times.** Write for Samples and Prices, to

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Reference—Augusta Bank. 16Atf

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Untested, 75c—Warranted, $1.

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I will send a Guaranteed 5-Banded Yellow Queen, bred from a Breeder selected from 1000 Queens (some producing over 400 lbs. of honey to the colony); or a 3-Banded Italian Leather-Colored Queen direct from a Breeder imported from Italy. Oct. '94—**at 75c.,** and a special low price for a quantity.

My secret is to sell an extra-large amount, which enables me to sell at low prices. Will run this spring 350 Nuclei—have 1 home and 4 out apiaries. No Queens superior to my Strain.

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3-Frame Nucleus and Italian Queen —$2.50.—

Untested Queens, 75c.; Six for $3.50.

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In the multitude of counsellors there is safety.—Prov. 11-14.

What Bees Cap Honey Whiter than the Italians?

Query 980.—Does any other kind of bees cap honey whiter than Italians, and if so, what?—Utah.

E. France—I don't know.

P. H. Elwood—Black bees.

Rev. M. Mahin—The blacks do.

J. M. Hambaugh—German brown.

H. D. Cutting—Carniolans and blacks.

Wm. M. Barnum—The Carniolan—a trifle.

Prof. A. J. Cook—Yes; blacks and hybrids.

J. A. Green—Yes. The common blacks or German bee.

Rev. E. T. Abbott—Blacks and Carniolans, and many hybrids.

R. L. Taylor—Yes, the German and German crosses, and others.

Eugene Secor—Yes, the German-brown, or so-called "black bees."

G. M. Doolittle—The blacks cap honey the whitest of any bees I know.

C. H. Dibbern—Yes; the grey Carniolans make the whitest caps I ever saw.

Mrs. J. N. Heater—The hybrids usually do, but their capping is not so smooth.

B. Taylor—Yes; native blacks do, and Carniolans are said to, but I have never tried them.

Chas. Dadant & Son—Yes, the common bees do, because they do not fill their cells so full.

W. G. Larrabee—I think black bees will give a whiter appearance to the cappings than pure Italians.

W. R. Graham—I have thought that the black or German bees capped their honey a little whiter than any other.

Mrs. L. Harrison—It's claimed that black bees cap honey whitest. I'm of the opinion that the claim is sustained.

Dr. J. P. H. Brown—Some say the blacks; but the difference is about the same as between tweedle-dee and tweedle-dum.

Allen Pringle—The so-called "blacks" and the hybrids both take the cake away from the Italians in that one respect.

Jas. A. Stone—From my own observation I have never been convinced that they do, though I have heard many claim the blacks do.

J. E. Pond—It is claimed that the blacks do so; I have never found difference enough, though, to make the matter of any consequence.

Dr. C. C. Miller—I don't know. Perhaps a microscope would show better work of blacks, but I always get highest price for the work of Italians.

G. W. Demaree—Yes, the inferior black type of bees use more wax when sealing their combs, which gives their combs a chawky-white appearance. But to my taste the straight Italians finish a more soft-tinted, delicious-looking comb.

Globe Bee Veil

By Mail for One Dollar.

Five cross-bars are rivited in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through.

It is easily put together and folds compactly in a case, 1x6x7 inches, the whole weighing but 5 ounces. It can be worn over an ordinary hat; fits any head; does not obstruct the vision, and can be worn in bed without discomfort. It is a boon to any one whom flies bother, mosquitos bite, or bees sting.

Nets, 50 cts. each.

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Golden Italian Queens $1.00 each. Free Price-List.

Wm. H. Bright, Mazeppa, Minn.

19Dtf Please mention the Bee Journal.

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15Dtf **C. W. Dayton, Florence, Calif.**

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W. SMITH, Cochranville, Chester Co., Penna.

13D26 *Mention the American Bee Journal.*

GOLDEN ITALIAN

QUEENS by return mail from a breeder obtained of Doolittle, which he selected and tested out of 1000, for his own special use; he said this Queen is a better one than the

WORLD'S FAIR QUEEN

which was valued at $50.00. Also

ITALIAN QUEENS

from one of A. I. Root's very best imported breeders. Price of Queens—Untested, 55c.; 6 for $3.00; 12 for $5.50. Tested, $1.00 each; 6 for $5.00. No disease. Shall run 400 nuclei. Ask for Free Circular, which may be worth dollars to you, if you buy Queens. Safe delivery and satisfaction will be guaranteed in each and every case. **H. G. QUIRIN,**

27D6t BELLEVUE, Huron Co., OHIO.

Mention the American Bee Journal.

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6 " queens	5 50
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3 " Queens.	4 00
1 select tested queen	2 00
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Select tested queen, previous season's rearing.. 4 00
Extra Selected for breeding, THE VERY BEST.. 6 00
About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.

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☞ Circular free, giving full particulars regarding the Bees and each class of Queens.

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12A25t BORODINO, Onon. Co., N. Y.

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Have been carefully bred for producing comb honey for the past 18 years, and by a special method for producing large, long-lived, prolific Queens. Can furnish either 3 or 5 Banded stock, bred in separate yards. 3-Banded bred from my own or Imported Mother. No foul brood or paralysis. Warranted Queens, purely mated, 60 cts.; Tested, $1.00; Selected Breeders, $2.50. Discount on quantities.

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W. J. Finch, Jr., Springfield, Ill

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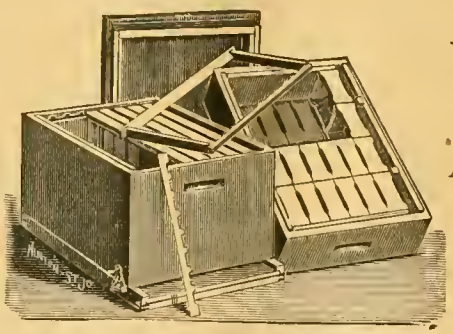

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Was first offered for sale. The following parties keep it in stock and have kept it for years for sale. Why? Because they want to handle only the best goods, and they say they get the best goods when they buy Dadant's Foundation.

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Page & Lyon, New London, Wis.
La. Bee-Keepers' Supply Co., Donaldsonville, La.
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G. K. Hubbard, Fort Wayne, Ind.
L. Hanssen, Davenport, Iowa.
C. Theilmann, Theilmanton, Minn.
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Is not such a steady trade a proof of real merit in the goods we sell? We also make a specialty of **Veils and Veil Stuffs** of best quality.

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We are receiving daily, unsolicited, testimonials like this:

THE A. I. ROOT CO.:—The Dovetailed hives ordered of you some time ago arrived from the railroad to-day, and this evening I put one of the bodies together, and must say it was just fun. Those dove tailed pieces were "yoost der fit." In fact, every thing seems to me so far to be better than the catalog promised or than I expected. I thank you for your promptness with which you filled the order, and especially for the quality of the goods you sent. I will say they are far ahead, as regards lumber in hives and frames than any I ever saw before, and I have seen a number ordered of other dealers, at lower prices; but for quality of lumber in both hives and frames, and for workanship, I have seen nothing to compare with those you sent me.

S. L. PAYNE, Westfall, Oreg., May 5.

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AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS

35th Year. CHICAGO, ILL., JULY 25, 1895. No. 30.

Contributed Articles.

On Important Apiarian Subjects.

Bees Building Ill-Shapen Combs, Etc.

BY G. M. DOOLITTLE.

A correspondent writes me thus: "I have a colony of bees which built nice, thinly-drawn, beautiful combs in the middle sections of the super, while the outside sections contain some of the heaviest and most ill-shapen combs I ever saw. Can you tell me why this is so? Please answer through the American Bee Journal, as I take that paper."

Something of this kind has been spoken of before in our bee-papers, and some seem to think that such a state of affairs comes about by the changes in the weather, the thicker combs being built while the weather was cool, and the thinner when the weather was warm. Others account for it in a somewhat similar but different way, which is that as the thin combs were built in the center, therefore this shows that there is greater heat over the center of the cluster of bees than elsewhere, as would be natural, while the heat not being so great on the outside, made the wax less pliable, hence the thicker and irregular combs. But I do not agree with either of these, for, as far as my knowledge goes, bees do not attempt to work wax unless the temperature is right for the successful working of the same, and bees are capable of making a right temperature just when and where they please, as I have often proven with my self-registering thermometer. A small cluster of bees can easily keep a temperature of from 93° to 95° during a cold, frosty night, as many night experiments testify, and that is plenty warm enough for wax-working.

From past experience I should account for the state of affairs spoken of by the correspondent, as being the loss of the queen in that particular hive, and especially as he does not speak of noticing any other colonies building such peculiar comb. If cold had been the cause of the trouble, all of the colonies would have built thick, irregular combs as well; but as it was one particular colony that did so, we must look for the trouble at this point.

Several years ago I had a colony of bees that were nicely at work in the sections, having a part of them filled with comb, when one day, in handling the frames below, I lost the queen by her falling off the comb, as I suppose, and from that date until they got a laying queen they built the poorest and thickest combs that I had ever seen at that time. Many of the sections had the comb in them "stubbed" off at the sides and bottoms; some were not built more than half down when the cells were lengthened out, filled with honey and sealed over, so that very much of the honey was unsalable. Since then, in trying to control swarming by caging the queen, I have had the same state of affairs, so that I am very positive that loss of queen was the cause of the whole trouble. In fact, I am often made to understand when a colony has lost its queen by the looks of the comb which they are building in the sections, thus being able to remedy the matter, when I otherwise might not know it, or not until the colony was considerably injured.

That not nearly as nice comb is built when a colony has no laying queen in the hive, is one of the reasons why I do not like the plan of taking away the queen in swarming-time to prevent swarming. Of course, where the sections are filled with thin comb foundation, better results are obtained, but even then the combs built by any colony not having a laying queen, are not nearly as nice as the same colony will give when the mother-bee is doing full duty in the hive.

GOOD QUEENS.—Another correspondent writes me thus, regarding the book, "Scientific Queen-Rearing:" "A friend tells me that you claim in your book on queen-rearing, that queens reared by what you term a 'natural process,' are better than those reared by other methods. Is this a fact?"

My book was put before the public with the sole purpose of benefiting the public, without any claims for it save a careful trial of the plans outlined in it by the one who was not fully satisfied with his or her present attainments along the line of rearing queens. I only wish to take space here to say that I do not claim for the queens reared as I advised in the book any superiority, because they are cradled in artificial cradles, or because these cradles are supplied with plenty of royal jelly into which the selected larvæ are transferred, or anything of that kind. No, nothing of the sort. These are only conveniences to pave the way for having the queens reared just when and where we wish them, by that good and inexpensive way of having them reared in upper stories of hives having a laying queen below, to supply bees to care for these cells all summer, so that we need not keep making colonies queenless every little while to rear queens, thus avoiding lots of labor, and throwing many colonies out of their normal condition, only to shorten our surplus honey crop to the extent which we unqueen colonies for this purpose.

What I do claim as superior is in bringing the *colony* into that condition where they will rear queens *leisurely*, and under the *safe conditions* that they do in superseding their own queens without the interference of man, as all know the *very best of queens* are reared. When this can be done, and that, too, without having a queenless colony as a loss on our hands, I think that all will concede it to be of advantage so to do.

Borodino, N. Y.

☞ It will pay any young bee-keeper to visit a large bee-keeper, who has a successful record, as one thus gains many hints that will be of great value to him.—Prof. Cook.

Phacelia as a Honey-Plant.

BY ANDREAS SIMON.

Among the many well-known honey-plants of this country and Europe, phacelia, a member of the family of Hydrophyllæ, has lately been lifted into special prominence by the Agricultural Supplement of the Illinois Staats Zeitung. In doing this, that paper was mainly incited by printed reports from the old country, where the high value of this plant as a honey-producer has quite recently been newly confirmed beyond any reasonable doubt.

It appears that the bee-keepers' society of the Kingdom of Saxony—a large and progressive body of men—undertook the task of instituting a general investigation among a goodly number of widely recommended honey-plants, for the purpose of ascertaining which of them ought to be selected as the best material with which to enlarge and improve the bee-pastures throughout the Kingdom. Phacelia was found to possess all the desired qualities, and to be the plant fulfilling the requirements in the highest degree. The aforesaid society started its researches by sending a trial package of phacelia seed to each district society in Saxony, and the latter again forwarded the seeds to the various branch societies, for the purpose of carrying on the desired experiments, and to observe the plant during its blooming period.

These experiments fully established all that was claimed for phacelia, and so as to induce bee-keepers to grow this plant extensively, the general society of bee-keepers of Saxony this year forwarded a *large* package of seed to each branch society, and each package was accompanied by printed directions, containing full instructions in regard to the methods to be followed where a successful culture of phacelia is to be aimed at. These directions were also reprinted in the German paper named above, a few weeks ago, and if the American Bee Journal should desire to publish them, the writer will gladly furnish a translation. Chicago, Ill.

[In the list of honey-producing plants found in the "A B C of Bee-Culture," phacelia is named. As it seems to be such a favorite in Germany, it might also prove to be valuable here. Doubtless bee-keepers would be glad to have the translation of the directions referred to by Mr. Simon, and he is hereby requested to furnish it, if he will kindly do so.—EDITOR.]

What Dr. Miller Thinks.

INTRODUCING QUEENS.—On page 425, Bro. Abbott says he always leaves his new queen caged in the hive two or three days before destroying the old queen. I may have been careless in my reading, but I don't remember to have seen that before. It looks like a good thing. For that queen is likely to be making some friends in that time, and an incident under my own observation makes me put trust in it. One spring, when a number of weak colonies petered out, I put five or six of their queens caged in a colony that had a laying queen, to be taken care of. The caged queens were taken care of all right. Then one of the caged queens was freed in the hive, and the others removed, and all was lovely.

BUYING QUEENS.—What Chester Belding says on page 424 sets one to thinking, and he may be partly right, at least. His idea is that the breeder picks out his best queens to sell at a high price as tested or select tested queens, and if you buy from the same man an untested queen you get only the refuse. But it must be remembered that when the tested queen is still untested the breeder knows nothing about her except her looks, and if all look just exactly alike he's just as likely to sell his best queen among the untested. Of course, they don't all look alike, but I'm inclined to think that a breeder who is all right in every direction will not send out an untested queen whose looks make it a certain thing that she shall be poor. I confess I don't know as much as I might on this subject, and I wish Bro. Doolittle would tell us what chance he thinks there is for getting among untested queens one that shall equal the best among the tested.

PREVENTION OF SWARMING.—What will satisfy one will fall short of satisfying another. The swarming problem doesn't trouble Chester Belding (page 424) with only 10 in 50 swarming, but it would trouble him, I think, if he kept an out-apiary, or could not have some one at the home-apiary in swarming-time. If only 2 in 50 would swarm, then one could afford to let those two go off and lose them, but when it goes beyond that the loss is too heavy. I believe he makes a good point by raising the front of the hive to give abundant ventilation.

HONEY-VINEGAR.—I once made some honey-vinegar, and it was not at all popular in our family. They didn't want any more honey-vinegar. Now comes Bro. Secor, on page 428, speaking of it in the highest terms. I once tasted some made by T. F. Bingham that was fine, and generally it is well spoken of. But what I made was poor stuff, and I incline to the opinion that if you want first-class vinegar you mustn't use too much fourth-class honey.

SWEET CLOVER.—"Nothing will eat sweet clover, either green or when cut for hay," says James H. Wing, on page 434. A good many people around here think the same thing until they know better. Both cattle and horses will eat it here when they get used to it, and I'm told that stock must be used to it before they will eat alfalfa or even corn. I've seen the roadsides for miles where not a stalk of sweet clover was allowed to grow half its usual height, being constantly eaten down. Will others tell us whether well-cured hay from sweet clover cut before blooming is never relished by stock in any part of Kansas?

DR. DUBINI'S SWARMING MANAGEMENT.—I've taken lots of comfort in seeing that there's one Italian word F. L. Thompson couldn't make out (page 473), for I'm just green with envy to think he can read any. I turn over yearningly the pages of the Apicoltore, making out a word here and there, and wishing I had time to study the language.

Leaving other points untouched, I'd like to know why Dr. Dubini says, "placing the swarm on the stand of the old colony.....is not for natural swarms, but assuredly for artificial swarms only." What is there in the case that makes it less desirable for natural swarms?

STRAWBERRIES.—Now that the smoke of the battle is clearing away, it may be well to inquire where "we are at" on the question of bees and strawberries. There seems to be evidence that in some cases bees pay no attention to strawberries, and in others that they do. Just exactly what per cent. of the total acreage of strawberries is profitably worked by bees remains unsettled, and will probably always remain so. Let us rejoice that bees work on strawberries in any case.

BEE-VEILS—ARE THEY NEEDED?—The article on page 430, recalls the difference on this question, some thinking they never need a veil, others thinking they should always be used. The writer of the article in question evidently intends to continue the use of a veil, no matter how much he may be laughed at. I can handle bees without a veil. Indeed, I don't always need either veil or smoke. There's a hive in which an experiment interests me, and at present I visit that hive daily or oftener, with neither veil nor smoke, generally bareheaded. But the truth is, that I nearly always have a veil when working with bees—at least have one on my hat ready to pull down

if needed, and pretty generally I don't wait to see whether it's needed before pulling it down.

I never wear gloves, because I'd rather stand the few stings I get than to have the discomfort and inconvenience of gloves. I don't think bees sting once on the hands where they do twice in the face, and I think I'd rather have two stings on the hands than one in the face. But I have handled some bees so cross that if a pair of gloves had been handy, I'd have put them on.

The doing without a veil with some bee-keepers looks a good bit like stubbornness. A veteran for whom I have high respect was one day with me, and I offered him a veil. Oh, no! he never used a veil; couldn't get him to touch one; but I noticed he kept the smoker puffing about his head all the time, and I thought if he'd been working with those bees he would have saved time by wearing a veil.

Every One to His Own Way.—Messrs. McArthur and Bevins may as well let-up on the controversy about killing bees. They'll never agree. Two elements enter—profit and pain. One thinks the profit so great that he ignores the pain. Another thinks the pain so great that he ignores the profit. One man may be as kind-hearted as the other, but they measure differently.

Overstocking.—I gave a very decided nod of assent when F. L. Thompson said on page 437, "Overstocking is something of which little is known, and reliable data are greatly wanted." The fact is that it's exceedingly hard to know anything at all about it, and if you should come to something like a conclusion one year, the next year may knock your conclusions all endwise. I feel pretty sure that my home-apiary is badly overstocked this year with 60 colonies, and yet next year double that number might do well. One phase of the matter isn't always considered. This very day I was talking with a man who knows so little about bees that he told me he fastened up the entrance to a hive so that not a bee could get out, in order to prevent a swarm leaving. Well, that man has beaten me in average yield of surplus, 10 to 1. And too many will say that his management must be better than mine, when the simple explanation is that 10 times as many bees are on my territory as on his. Where 50 colonies will starve in a poor season, 5 might yield a good surplus.

M. Hamet is spoken of on page 438 as "an intelligent and progressive French bee-keeper." A man of prominence and influence he certainly was, but some whom he bitterly opposed in their efforts to introduce movable-frame hives, that could, as he expressed it, "be taken to pieces like a puppet show," would hesitate to call him "progressive." He stubbornly remained a box-hive man most of his life. Whatever is "progressive" in French bee-keeping, is very largely due to a Frenchman of whom we Americans feel proud—Monsieur Charles Dadant, of Hamilton, Ill.

Yellow Bees.—B. F. Harford says on page 449: "I will risk the conclusion that the yellow bees are all right in each and every respect, although Dr. Miller and others are of the opposite belief." I don't know exactly what I may have said to which Friend Harford refers, but there's nothing in my belief that hinders me from thinking that his yellow bees may be the best in the world. Being yellow doesn't make bees bad, and it doesn't necessarily make them good. Where great pains is taken to breed for color, there is danger of its being at the expense of more valuable qualities, and yet there *may* be such a thing as retaining all the best qualities along with bright color. Marengo, Ill.

☞ See "Bee-Keeper's Guide" offer on page 479.

Small Nails for Spacing Frames.

BY CHAS. A. F. DOERR.

Referring to my article on page 389, Dr. C. C. Miller, on page 422, asked me to answer some questions in regard to the matter, as follows:

1. "Will he please tell us whether the top, bottom and end-bars are all the same width, one inch?" Why, Doctor, to secure an accurate spacing of the frames by this method, the top and bottom bars must be of the same width, one inch. That the end-bars are just one inch wide, is not absolutely necessary, but I make them so, because the frames are then easier to put together, so that they are square in every way, and not wry. This is very important—not to get troubled with brace-combs.

2. "What is the thickness of the top-bar?" As I make my frames (Gallup) out of common laths, such as are used in house-building, all the bars have the same thickness of these —5/16 to ⅜ of an inch. In making a Langstroth frame, I think the top-bar should be thicker in order to prevent sagging.

3. "Please tell us why the two nails on one side of the frame are not both at the same end." This very same idea struck me two days after sending my former article, and I at once made a set of frames, at the same time putting the spacing nails as near the ends of the bottom and top-bars as would be advisable; hived a swarm on them, and compared this new frame with its elder brother (or were they sisters?). The younger was much the superior of its elder, as the frames can now be taken out of, and put into, the hive without injuring the neighboring frames in the least.

4. "How far apart must the frames be pushed so you can easily put another frame between them?" If *all the frames are square in every way* (not wry), ⅛ to ¼ of an inch will do.

As to brace-comb, I think it is very important that all hives stand perfectly level; that the frames are made rectangular; that top and bottom bars are not wry. If this is the case, the frames will hang perpendicularly in the hives, the combs can be built perpendicularly in the frames, and they can be exchanged as you please, and yet the surfaces of the combs will remain about the same distance apart. I believe many are negligent on this point. Maywood, Ill.

Something on Nectar-Secretion—Paralysis.

BY JAMES CORMAC.

Mr. L. S., of Aurora, Ill., asked Dr. C. C. Miller how long white clover (*Trifolium repens*) has to bloom before it yields honey (see page 393). L. S. said that it was in full bloom, but the bees did not work on it. The Doctor replied that at Marengo, June 3, it presented the same conditions, and further, that there was a lack of rain, but did not believe it was from that cause. The same conditions prevailed here in Iowa, but no lack for rain, as we are now and have been well supplied. Vegetation, for the past 20 years, has never been more luxuriant. It is from the want of moisture for the past two years, and from the same cause elsewhere, where rain did not fall in sufficient quantities last year; also too close pasturing during the season.

The year 1894 will be long remembered as one of excessive heat and great drouth—almost an entire failure in rainfall for months; vegetation withered and became as sear as if stricken with frost; even large, stately trees succumbed, and were killed outright. Hot winds scorched and dried up almost all vegetation in many localities.

All vegetable growth is, by aggregation of cells, filled with starch composition, carbon, hydrogen and oxygen, with two equivalents of water. This starch is stored in the roots,

trunk, branches and leaves; in other vegetation, roots, stems, leaves and seeds.

As I am here principally dealing with white clover, the above will present the foundation for my explanation of the cause of failure to secrete honey, otherwise nectar. As moisture and heat are necessary for vegetable growth, these conditions must be existent to a normal amount in any region, and especially active in the temperate zones, as the season of vegetable growth and maturity is shortened by the regular return of the cold season.

Favorable conditions must exist, a seasonable time to permit of cell-formation, and sufficient formation and deposit of starch both in the roots and stems, principally in the roots of the clover; and in stems and leaves of annual honey-producing plants, producing nectar later in the season. As clover blooms earlier than most nectar-producing plants, favorable conditions must maintain the previous year, as most of the pabulum that is consumed in the growth of leaves, stems and bloom must be on deposit in the roots, and they well supplied. This cannot be accomplished if deprived of a normal amount of moisture, not only during the spring months, but throughout the summer and fall. Winter snows assist this storing and elaborating the starchy product for immediate use in the spring, as the circulation of sap is not checked to the extent as when the ground is hard frozen. This storing and elaborating process furnishes the plant with early food. An early and vigorous growth is obtained in the leaves, which are the lungs of plants. Circulation of sap is therefore hastened, the roots stimulated to an equal expansion, then favorable conditions continuing, a visible supply is obtained, and a surplus is thrown off as nectar through the nectaries of the bloom. Otherwise what is stored in the preceding year is consumed only in plant growth, even to the depletion of stores, to produce seed, and all seed is almost wholly starch.

There must exist other favorable conditions. It may be dry during the period of nectar-flow, and not mitigate against it, if during this period electrical conditions maintain to the production of ozone, which being absorbed by the leaves, the same as carbonic gas, through pores in the leaves—as oxygen is to animal life, so carbon is to vegetable life.

Some smiled at the prophecies of Wilson, of Tennessee, but he was more than half right in his predictions.

Close pasturing works injury to nectar-secretion, as it reduces the foliage, so also the rootlets suffer as nature strives to sustain a just proportion between leaves and root expansion, causing scattered nectaries in the blossom, or only partial development.

The past year's drouth naturally affected the basswood in this section, which, at this writing (June 26), is in greater profusion of bloom than that of 1894, but diminished in nectar. Deprived of white clover, we placed our dependence upon that for section honey—another disappointment; therefore, apiarists must look to fall flowers for winter stores, or patronize the sugar-barrel as we have done in year's past.

Though the present summer has an ominous look, we bank largely on 1896. The plentiful supply of rain has stimulated growth to a wonderful extent, that has not been excelled for the past 20 years. The scant remains of clover is being wonderfully stimulated, either from remains of rootlets or seeds, and is taking its place with other forage-plants as of years past. But for all this, we have given up hopes of former yields, consequent upon increasing population, and the turning over of grazing lands for cultivated crops.

The apicultural specialist, unless farmers can be convinced to seed with Alsike in place of red clover, must vacate the premises. Persuasion seems almost useless, as custom has established their methods, and they are almost as unchangeable as the law of the Medes and Persians was reputed to be. Yet progressive farmers claim Alsike the best forage-plant, also for fodder.

Bee-Paralysis.—J. W. P., of Omaha, Nebr., on page 394 of the American Bee Journal, in his experience with a colony crawling out of the hive and dying, asks the cause. It is known that nectar of certain flowers taken by bees causes vertigo and death, and is accompanied with similar symptoms as bee-paralysis, except the loss of hair. The probable cause is poisoning—may be from spraying poisons. The adoption of spraying has become almost a "fad" with many; spraying to excess gardens, orchards, shrubs, etc., and in many cases loss has occurred. In a severe case of bee-paralysis, in a colony with a Texas queen this spring, well supplied with good honey, on trial of sundry remedies, and failures, I used finally equal parts of benzine and turpentine, taking out the frames and spraying the hive with about a tablespoonful of the mixture. The first dose helped wonderfully, and using it every other day three times more, the disease disappeared entirely. Now that colony is as strong as most in the apiary, and storing as fast as any. Will others try it, reporting through the American Bee Journal? Des Moines, Iowa.

A Swarming Experience—Other Things.

BY EDWIN BEVINS.

I feel, Mr. Editor, as if I would like to lick the man who said in answer to Query No. ——, that he never "commenced to divide." I thought that if he could get along without dividing, perhaps I could get along the same way, and so this season I have allowed the bees to swarm according to nature. Result: One of my most valuable queens and a half bushel of her offspring are gone to the woods. Another swarm landed on a large limb of a tolerably high oak-tree, standing in the door-yard, surrounded with the summer's supply of firewood. A hive was placed on the wood-pile, and the limb was partly sawed off and swung so as to bring the bees in front of the hive. As soon as they made themselves at home in the hive, I started to carry it to the old stand, but lost my footing on the wood and fell with the hive under me. The cover slipped about half way off, but before the bees recovered from their astonishment sufficiently to fly out, I had the cover in place and carried the hive to the stand without the loss of any bees. I think that I shall "commence to divide" pretty soon, unless somebody sends me a self-hiver that will catch them every time.

Low-Growing Trees, Etc.—I have experienced this season some of the advantages of having low-growing trees and grapevines near the bee-hives. The hives are situated on the south side of an apple orchard, and in front and among the hives are cherry, peach, plum and pear trees, and grapevines. I have harvested three swarms from the same place on one grapevine, and two from one small cherry-tree. Several swarms have alighted in the apple-trees.

Hive-Covers.—I want to say to Dr. Miller that my hive-covers show but little disposition to twist. If any of them do, I take it out of them by attaching hive-hooks near diagonally opposite corners. Since I fell down with that swarm, I am more delighted than ever with these covers with the heavy cleats.

Dr. Miller solemnly concludes that I was trying to make fun of Doolittle's old man. I as solemnly aver that I was not trying to do any such thing. The old man has stood up on that narrow platform, in that indescribable foot-wear, and under that dilapidated and shapeless old hat, about as long as it is in well-regulated human nature to stand it. I am going to buy my next queen of Doolittle, and then if he does not get the old man a pair of new boots, and a new hat, and put some things in between to correspond, I will not buy any more of him—that's all! Leon, Iowa, July 2.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

One Live Specialist Found.—The following letter will indicate that there is at least *one* live specialist in the honey-busiuess in the United States :

LAS CRUCES, NEW MEXICO, May 29, 1895.

MR. E. T. ABBOTT, St. Joseph, Mo.,

Dear Sir:—In your article on page 270, you ask if there is anyone in the United States who makes a living out of bees alone; if so, to hold up his hand. Well, here comes one with both hands up. I make a living out of my bees and have no side-shows of any kind, and also have some money left over my living. You ask, "How do I do it?" Well, I keep on an average about 200 colonies of bees, work them for comb honey, and sell wherever I can find a market. I have new honey now ready for sale. J. G. STEWART.

Cannot Friend Stewart give us a short article on bee-keeping in New Mexico? Tell us from what his bees gather the most surplus, how much he gets per colony, etc. In fact, give us any information which he may have that will be of interest to the general public.

Stinging of Bees—Are You Sure?—"A bee never volunteers an attack, save in the immediate neighborhood of its hive, and even then never without some reason."

This is quoted from an article in the British Bee Journal, but I have seen substantially the same thing in a great many other places; but notwithstanding this, I am inclined to think the statement a little too sweeping. I have come in contact with bees which seemed to me to take a special delight in stinging without any provocation at all, and this without much reference to their hives. I think it would be well to modify the above statement by saying: "Most bees rarely ever volunteer an attack without some provocation, and then only in the immediate neighborhood of their home." This would avoid the possibility of having the statement called in question; for if we make stronger claims for our cause than we can substantiate, we only weaken it in the end. It is well, if possible, to impress upon the minds of the general public that the ordinary bee does not go around seeking whom she may devour, but there is nothing gained, in my opinion, by presenting her as an entirely harmless creature, which can be handled with impunity. I have found by experience that she is not always built that way.

Swarming—Which is Which?—"Prevention of swarming does not come under the head of advanced bee-culture. It is a step backward. encourage bees to the point of swarming and it will be found at the same time that they are encouraged to gather and store honey in a way that indicates great energy and activity."—Henry Alley, in 1893.

"While the steel-gray strain of Carniolan bees will swarm themselves to destruction, there has never been a swarm issue from a colony of Adel bees in the Bay State Apiary since the gray, or dark blood, was bred out. The more true steel-gray bees found in a colony the more they would swarm. The more yellow-banded bees the less they have swarmed, till now they do not swarm at all."—Henry Alley, in 1895.

Friend Alley seems to be a little mixed, or else he is letting self-interest warp his better judgment. It seems to me that he does not do the true Carniolans justice. I had them in my apiary for a number of years, and I did not find them any more inclined to "swarm themselves to destruction" than are the Italians. The queens are great layers, and the colonies build up very rapidly, and, of course, if they are not given room "according to their strength," at the proper time, they will swarm, and so will the Italians; and I cannot help but think that Friend Alley's so-called "Adel" bees will do likewise.

Apis Dorsata—A Question.—"Do we want Apis dorsata?"—Gleanings.

Well, I suppose that depends very much upon who is meant by "we." If I am included in the "we," I can say for one that I have no special yearning for the animal at present. Of course it depends some upon who is to be sent after her. If I am to go, and there is enough "in it," then, of course, I want her very badly. If the other fellow is to get the job, and I am to have nothing to do with it, then I am dead set against having anything done with Madam Dorsata at present.

It seems to me, to be frank, that this whole dorsata busiuess is a neatly gotten up scheme in the interest of one individual, and that the mass of the bee-keepers have no interest whatever in it. If the Government wants to encourage apiculture, it can find a field of operation without sending any "special agent" to the jungles of India. It might try its hand a little on the improvement of *Apis mellifica* at home.

There is a gentleman at Washington now who is accredited as the "Special Agent in Apiculture," but if he has done anything to promote the general interest of the industry, I have failed to learn about it, unless it be a thing of special advantage to have the report of the last North American Bee-Keepers' Association withheld so it can be published with the report of the meeting to be held in Canada in September.

I have heard it hinted that this special agent was writing a book on apiculture to be distributed free by the Government. Well, this may help the industry, and it may not. There are some very good books on the subject now, and they cost but little. Even if this should prove to be the book *par excellence*, if it is as long coming in proportion as the report of the North American, we will all have departed to the bourne from which no traveler returns, before it is published.

But I wander from my subject. As to wanting Madam Dorsata, I say *no*.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Growing Basswood from the Seed.

DR. MILLER:—One of your correspondents, on page 426, asks when to plant basswood seed, and you say you don't know. I will tell you what I know about it, and you can use the information as you see fit. I presume there are lots of bee-keepers who would like to know, and I feel sure they should all be raising basswoods.

The seed should be gathered when ripe, and mixed with moderately damp sand and packed in a box in the cellar where it will not freeze. Wet the sand two or three times during the winter, so that it will not become too dry. In the spring, sow broadcast in open ground or in drills, as you would peas, and cover very lightly. The roots start first, and grow down into the ground; the sprout starts afterward, and gradually assumes an erect position. If they are covered too deeply they will never rise. Less than a quarter of an inch is enough. The bed should be kept damp, and to prevent evaporation it is well to cover with muslin, as in a cold-frame.

Denison, Iowa. GEO. W. STEPHENS.

That's right to the point, and we certainly owe Friend Stephens a hearty vote of thanks.

Non-Swarming Bees—Queen-Rearing.

On page 419, the question was asked whether swarming or non-swarming bees were preferable. The majority seemed to favor the swarming kind. Now I have had but little experience in the apiary, this being the seventh year I have kept bees, and paid but little attention to them until last year, when I bought a few books, subscribed for two bee-papers, and commenced giving the bees special attention. You see my experience is very limited, but this much I know, and that is, that I want the non-swarming bees. I have a colony that has not swarmed since I have had them, and that is over five years, this being the sixth season, and no swarm yet. They do not look to be overly strong at any time, but they get the honey just the same. They have given me over 100 pounds of surplus comb honey every year since I have had them, and in 1893 they gave me 147 pounds of nice comb honey, this being the largest amount they have given me any season so far. (During these same years some of the other colonies gave me no surplus at all.) I want to rear queens from this queen, and stock most of my apiary with her daughters this fall. I lately bought Doolittle's "Scientific Queen-Rearing," and will use his method of rearing queens.

Now suppose I take these queen-cells just before they

hatch, put them into cell-protectors, and place them in the supers on the hives of queens which I wish to supersede, will these bees allow this queen to hatch, take possession of the brood-chamber, and will they then kill the old queen?

Owing to dry weather we will have a very light crop of honey here this season. R. W. T.

Harrisonville, Ill., July 6.

ANSWER.—I've never tried that in the fall, and it doesn't succeed in the beginning of the honey harvest, but we have the word of an excellent authority, G. M. Doolittle, that the plan you propose will be a success if practiced at the close of the honey harvest. If I were in your place I think I would commence operations right away, and if the first cell given to a colony does not succeed, I'd have another ready to put in its place as soon as the young queen from the first cell was destroyed.

Won't Work in Sections—Potato Blossoms.

My bees have failed to work in the sections when there are starters, and some sections partly filled with comb and honey, and are crowding the queen out of the brood-nest.

1. Do you think it would do any good to uncap the sealed honey in the brood-frames, and put them back? I have no extractor.

2. There is something the matter with one of my colonies—is it foul brood or not? There is dead brood of all stages from the smaller size to the fully developed bees. The larvæ are of a brownish cast, and settle to the bottom of the cell, but it will not adhere to a toothpick, as the books say.

3. Do bees work on potato bloom? If they do, do you suppose they could have been poisoned by bug-poison on the potatoes? D. E. D.

Whittington, Pa., Ind., July 8.

ANSWERS.—1. It might and it might not. It will do no harm to try. Generally when they will not work on sections partly-filled with comb, it's because there isn't enough nectar yielding.

2. I hardly think it's foul brood.

3. I never saw bees work on potato blossoms, and yet I think I have read of cases in which it was supposed that bees were poisoned through poison on potato-vines.

Rearing Qeeens—Laying-Workers.

The past spring I had a strong old colony in an old, out-of-date hive that I wanted to get rid of, so I divided them, by taking the old queen and the most of the old bees and putting them into a new hive full of foundation. Then in 21 days after everything was hatched, I transferred the two swarms from the old hive into a new hive full of foundation, and they went to work like beavers, and have their hive nearly full of honey. They were put into the new hive 15 days ago. I examined them to-day, and they have only just a very little brood started.

1. What I want to know is, whether a queen reared by the young bees from the brood that was in the old hive would bring forth a good laying queen, or whether she would be of inferior quality?

2. I also want to know whether a laying-worker's eggs would bring forth good, strong worker-bees? Could they rear a good, strong laying queen from brood-eggs laid by a worker-bee?

I have 25 colonies all in good condition, but bees have gathered very little honey on account of the dry weather.

Rawson, Ohio, July 3. L. H.

ANSWERS.—1. If there were plenty of bees in the hive they could rear a good queen.

2. No, you can't get worker-bees either strong or weak from the eggs of laying workers. Neither can you rear a queen from such eggs. They will produce nothing but drones.

Two Swarms that United in the Side of a Dwelling-House.

I have three colonies of black bees, two in 10-frame hives, and one colony in a double-walled box-hive, and they are doing well so far this summer. They have plenty of basswood blossoms in this locality during the summer season, and also such as golden-rod, boneset, catnip, mint, sumac and white clover.

On May 30 there came a swarm of hybrid bees to my house at about 5:30 p.m. Not being home at that time, they went in at a knot-hole at the top weather-board of the house.

Also on May 31 there came a swarm along at 9:30 a.m., and happening to be around I tried to make them cluster on a tree by throwing ground and sod into the flying swarm. On account of them coming so near the house, they mixed with the flying bees that went in on May 30, so there are two swarms together. They have two entrances where they pass in and out, the one entrance about two feet below the other. The lowest entrance I enlarged some by boring the hole larger. They have 3 feet deep, and 3 feet from one studding to the other, the studding being 3x4, so they have that much space between the weather-board and the lining of the inside. The weather-board is about 12 feet long from the corner to where they are joined. Would you advise cutting the boards, or taking off the whole length? I thought of sawing the weather-board along the studding, and to transfer them into an 8-frame chaff hive, on account of there being so many bees. I am afraid there are too many for an 8-frame hive. Or would you leave them in the house until next summer, and hive the first swarm that they cast, and transfer them? They are no hindrance in the house, only I am afraid they would freeze during the winter. E. T. R.

Chain Dam, Pa., July 8.

ANSWER.—I should be afraid they might not winter in such narrow quarters, and would prefer to get them out as soon as possible. A carpenter could tell you better than I whether to cut or take off the whole length, especially if he looks at the place. I hardly think you will find much trouble in getting them into an 8-frame hive, but if there should be too many bees for that, you can easily give them a second story, and with 16 frames they certainly will not be cramped for room. If two large swarms united, one of the queens would be killed, and the number of bees would be less now than when they came.

Getting Bees to Work in Supers.

I have a few colonies of bees in 8-frame dovetailed hives with supers on, and a little honey coming in. They have about three pounds of honey besides pollen in each frame, on an average. Of course, a little more in the outside frames than in the center ones. They are crowding the queen, so much so that the colony is apparently weakening. They go up into the super (at least a few of them), but do not seem to do any work up there, and seem to be almost at a standstill. The last two years we have had a light honey-flow, which lasts all summer. Now what would you advise doing, to get the bees to put the honey into the supers, out of those frames?

There is honey-dew on the box-elders here, but the bees do not seem to care for it. I have not seen them work on it yet. R. R.

Ogden, Utah, July 5.

ANSWER.—It's possible the flow isn't enough to make them feel they can afford to store in supers. Scratching the cappings in the brood-nest may help. Perhaps the best thing is to put by way of bait in the super some drawn-out comb, or a piece of comb with brood in. If they don't store then, it's because there isn't enough to store.

An Experience with Bees—Swarming.

In the spring of 1891 I got the bee-fever, or honey-fever, rather, and decided to buy one colony of bees, just to get some honey to eat, and my wife told me that it would be money thrown away to buy bees and not know how to take care of them. I told her I did not expect to do anything with them, only if they should store some honey I could get Mr. Alexander to take it off for me, and we would have some to eat as we wanted it. On June 6 I bought a new swarm of one of my neighbors; they did not swarm again that year, but the next year they did, and I got a neighbor to come and hive them for me, and that made me two. Then I longed to know how. I subscribed for Gleanings, and ordered "A B C of Bee-Culture," read everything I could get about bees, and talked with every man that would talk about bees, and told him all I had read, and all I had learned. I now take the American Bee Journal, which I find the most instructive of anything I have found, besides my "A B C of Bee-Culture."

In 1894 I found one colony queenless, and sent to Texas for a golden Italian queen, which I introduced by Mr. Doolittle's plan, with success, and that summer I reared several queens from her, and last fall I ordered leather-colored Italians from Ohio, and put into winter-cases 26 colonies packed with cut corn-stalks. On opening up this spring, I found my Texas queen and bees, and one of her young queens and bees,

all dead, that being the first and only winter loss I have had. I clip my queens, and after they swarm I move the old hive to a new stand, and after a few days cut out all but one queen-cell, and I am not bothered with any second swarms, or haven't been for the past two years, but before that they swarmed all the time.

I use in the brood-frames heavy foundation, some small and some large, but in the sections full sheets. I have had but two swarms this spring, and they came out on Decoration Day, and the next day I looked both old colonies over to see about their preparing to swarm; I failed in both to find the least signs of a queen-cell. The reason I was anxious to look was this: By reading, or talking with people, I would hear them say, "If the weather keeps warm like this a day or so, we will get some swarms." Or, "If honey continues to come in a few days, we can look for swarms." Yet it is said, too, that bees always prepare before hand. Also, we hear it said that sometimes when a swarm comes out it excites others, and they come out, and several would be in the air at the same time. The question is, Had they prepared? Were they ready for the excitement? The thought came to me, "How much preparing is wasted in changeable weather? I would think they would get discouraged, and hardly know what to do;" and on looking it satisfied me that they some times take a sudden start.

1. Now for a question: If Nos. 1, 2 and 3 should swarm out at the same time, and cluster together, with Nos. 1 and 2 with clipped queens, No. 3 with a laying queen or virgin, will Nos. 1 and 2 go back to their own hive? If not, what is the best thing to do?

2. I have read a great deal about how to prevent swarming, and have given it considerable thought, but not any practice, and have decided this: About apple-blossom take one, two or more of the *best* queens (according to the number of colonies), and kill, sell, or give away, and as soon as those colonies have a good supply of queen-cells, all sealed, go to the other colonies and take out those queens and give them a good cell in a queen-cell protector, and by the time she is hatched the bees will be glad to receive her. What do you think of that plan? J. W. P.

S. Onondaga, N. Y., June 29.

ANSWERS.—1. The probability is that the bees of Nos. 1 and 2 will remain with the swarm that came from No. 3, and do just whatever the swarm from No. 3 would have done if it had been left entirely alone. The easiest thing would be to hive them all together, and perhaps that might be the best thing if the swarms were not too large, but it must be remembered that such mammoth swarms will not remain so large, and by fall will be no larger than if only a third of the bees had been with the queen in the first place. If you don't want all of the bees to remain with the swarm, you can return some to the parent colonies, or you can divide the bees into two lots, hive them separately, and furnish a queen to the queenless part.

2. In the first place, is it a good plan to pick out your best queens and sell, kill, or give them away? Why not make a nucleus and save your best queen? But that has nothing to do with the real gist of your question. I think your plan would work all right in some cases, and in others the bees would swarm just as soon as the young queen was old enough; that is, within a day or two after leaving the cell. But it might be worth while to try, and if you do try the plan I wish you would report what success you have.

Swarming Not Wanted—Eight-Frame Hive.

1. I have a swarm of Italian bees that I divided, and then sent to New York and got a queen about one month ago. After I introduced the queen, perhaps three or four days, a swarm came out. The queen's wing was clipped, and they came back and went into the same hive. I thought to-day I would put in another frame of foundation. After I opened the hive, I thought I would look and see if there was much brood; I did not find much, but found 12 or 15 queen-cells. I cut them out, for I did not want them to swarm again. On one of them I found two young queens, but did not see the one I put in. I took one out, and left the other in the hive. Now what do you think has become of the old queen? Why didn't the queens tear down the cells? Do you think there were three queens with all of the cells? Did I do right? If not, please tell me what you would have done.

I put the old queen with the new colony, and they are doing splendidly. They have just commenced to work in the sections.

2. I have 8-frame hives, with seven frames in each. Would you put in the other now, or wait a little while longer?

Danbury, Conn. W. N. D.

ANSWERS.—1. If I understand you correctly, the bees swarmed and returned, and after some days you found two young queens and a number of queen-cells, and the old queen gone. That's just what you might expect to find nearly always. When bees swarm, or try to swarm, and the old queen cannot go with them, the maturing of the young queens in the cells goes right along just as though the old queen had left, and when a young queen emerges the old queen is put out of the way. I don't know anything better you could do than you did, merely to destroy any cells and leave only one queen in the hive. I'm not sure, however, that the result would have been any different if you had left them entirely alone, for if the bees had intended to swarm they would hardly have allowed the second young queen to emerge until the first was safely out of the hive.

2. There isn't much difference between 7 and 8 frames, and I don't suppose it makes much difference when the eighth frame is put in, but it's safe for the colony to have it put in very soon.

Nucleus Tearing Down Queen-Cells.

Why does a nucleus that I made tear down not only the queen-cells that I inserted on one frame, but very often the queen-cells that I gave with the frame. After that, although queenless, the bees stored some honey, but do not feed the brood in the same frames. I never saw such a thing in Italy.

Here the bees are beginning to store some surplus honey, now that the alfalfa is in blossom. I made some nuclei, but I had much difficulty to save them, because before the alfalfa there were no flowers in the fields, and the robbers were very bad. Now that there are no more robbers, the bees tear the queen-cells down. What for? S. A.

Beowawe, Nev.

ANSWER.—Without knowing more particularly about it, it is hard to tell why the bees tear down your queen-cells. It is possible that the cells were given too soon after the bees were separated from their queen. You know that bees that have no desire to swarm will tear down queen-cells as fast as you give them, so long as they have a queen. Now when you form a nucleus, if you give them cells as soon as the nucleus is formed, they have not yet discovered their queenlessness, and will tear down cells just the same as though the queen were yet present. If this be not the trouble, I don't know what it can be, except that bees are very freaky and will sometimes do all sorts of unreasonable things. If I am correct in my surmise, then the right thing is to wait perhaps 24 hours after forming your nucleus before giving queen-cells.

Didn't Swarm After All.

1. What is the matter with my bees? I have practiced dividing this spring with half of my colonies, and I left the remaining colonies to swarm naturally. On examining some of them I found sealed queen-cells, and some not yet sealed, and the old queen laying right along, but they never swarmed, and from the fifth day to the seventh after the first was sealed, I would find young queens lying out on the ground in front of the entrance dead. They had been cut out for some cause or other—I know not what for. One thing I do know, that is, the young queens were gnawed out of the cells and dragged out of the hive. The indication was, as far as I could tell, that they were going to swarm, but they never did. The colonies were not queenless, for I examined closely, and found the old queens. This was the case with all of those colonies that I left to swarm naturally. Can you give me any information on this?

2. Which do you think did the work, the old queen or the bees? J. M. J.

Pike, Tex., June 29.

ANSWERS.—1. It is nothing so very unusual for bees to make preparation for swarming and then change their minds and give it up. Especially is this the case if the weather is very unfavorable, or if pasturage is scarce.

2. I think the workers did the work of destruction.

That New Song—"Queenie Jeanette"—which is being sung everywhere, we can send you for 40 cents, postpaid, or club it with the American Bee Journal for one year—both for only $1.10. Or, send us one new subscriber for a year (with $1.00), and we will mail you a copy of the song free.

The American Bee Journal
ESTABLISHED IN 1861
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George W. York, - - Editor.

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Editorial Budget.

The Annual Report of the convention of the Ontario Bee-Keepers' Association held at Stratford, Ont., last January, is on my desk. It is a 64-page pamphlet, and gives the proceedings in full. It is an interesting publication, and should be in the hands of every Canadian bee-keeper, at least. It can be had free by addressing the Honorable Minister of Agriculture, Toronto, Ont. The list of members, as given in the annual report, shows exactly 176. Pretty good!

Dr. O. S. Brown, of Londonderry, Ohio, at the recent meeting of the Ohio State Board of Agriculture, was selected as expert judge of bees, honey, apiarian supplies, maple products, etc., to serve during the Ohio State Fair at Columbus, Sept. 2 to 6, inclusive. Dr. Brown was present at the World's Fair convention of the North American, where I had the pleasure of meeting him and his wife. The bee-keepers of Ohio should make a good display, if possible, at the State Fair, and thus give the apiarian judge a good chance to show what he can do in the position to which he has been appointed.

The Premium and Clubbing Offers published in the Bee Journal are fairly clear, I think. Please read them carefully, and then do not ask or expect anything more than is offered. For instance, the premium book "Bees and Honey," is now given to a new subscriber *only* when he or she sends the full $1.00 for the Bee Journal. Understand, please, that hereafter only *one* premium is given for sending a new subscriber. Please read the premium offers carefully, and then no misunderstandings will arise.

Orange Blossom Honey is reported in Gleanings, by Rambler, who says that Mr. G. K. Hubbard, of Riverside, Calif., has produced over a ton of the article. He also says, "There is no slipshod management about Mr. Hubbard's apiary, and a few more such expert bee-keepers would have a marked influence upon the value of our products in the markets."

That's a tally for Indiana, for Mr. Hubbard removed from Ft. Wayne on account of his wife's ill-health. If his wife has better health in California, and he has the best honey, I don't see any reason for complaining in that household. Health and honey ought to go well together. And 'tis said they have lots of the former (health) in many parts of the Golden State, and much of the latter (honey) quite often.

Bees and Grapes.—It has often been insisted upon by those who are not better informed on the subject, that bees injure grapes. I happened to run across two testimonies on the subject, which are given here for the benefit of those who may have occasion to need something of the kind in order to effectually answer any complainants.

The following item is from the Country Gentleman—a well-known country weekly, published at Albany, N. Y., evidently a reply to an inquiry upon the subject:

G. T. G. must be mistaken about the bees injuring his grapes, or he has a different race of bees from mine. I have three kinds, 50 colonies in all, placed between the grape-rows. The grapes have never been injured in the least by them. A neighbor has 120 colonies of bees also between the rows of grapes. I know the grapes have been perfect, for I have bought and sold them for five years for first-class grapes for hotel-table use. If G. T. G. will look at his grapes, he will probably find three-cornered punctures, with a piece of skin pressed in. If so, it is the work of birds. After the skin is broken the bees will take the juice, but not before. The experiment has been tried of putting a colony of bees in a green-house grapery without food. The bees did not break a single grape, but died for want of food. It is a mistaken idea of bees puncturing grapes; I think bees and grapes go well together. The neighbor of whom I spoke is a widow 50 years of age. She has sold as high as $800 worth of grapes and honey from three acres of land occupied by the bees and grapes.

Onondaga Co., N. Y. CHAS. MILLS.

The other item was found in the Montreal Witness, and reads thus:

An enquirer some time ago wished to know if bees were injurious to grapes. In confirmation of the negative reply then given, the following testimony is to the point:

We have had grapes and bees for 15 years, and never had the former injured by the latter, or even seen bees on the grapes with the exception of two years. On these two occasions a strange flock of orchard orioles visited my vineyard and destroyed nearly all my Brighton, and some Jeffersons. After these birds had cut the skins with their sharp bills, the bees flocked to the grapes and sucked their juices but those two years, and other years I never saw bees on grapes that had not first been skin-broken.

There is no proof extant that bees ever injure sound grapes, or that they are able to do so.

Such direct testimony should count for much, and help to silence the assertions that bees do destroy grapes. They only help themselves after the grapes have been first punctured by some bird or other insect.

The "10 Weeks for 10 Cents" Offer to new subscribers was withdrawn July 15, as advertised. To any received after that date, 10 back numbers of this year's Bee Journal have been sent, and we will renew the offer of "10 cents for 10 weeks" (or 10 back numbers) so long as our stock of back numbers of 1895 holds out. So, to any one sending 10 cents, we will mail 10 different back numbers, all to be since Jan. 1, 1895. Ten of such numbers are just as good for getting a fair idea of what the Bee Journal is, as would be 10 future numbers. The 10 back numbers will all be of different dates, but will not be consecutive numbers.

The W. T. Falconer Mfg. Co., of Jamestown, N. Y., large dealers in bee-keepers' supplies, say this in the July American Bee-Keeper, in reference to the business they have done this year:

Taking it altogether, we have done a much better business than for several past seasons, although the late frosts, followed by extremely dry weather, caused trade to stop very suddenly about the middle of June.

The Amalgamation of the North American and the Bee-Keepers' Union is favored by Gleanings also. So far as I have seen, all the bee-editors are in favor of it. If the amalgamation is effected, certain bee-periodicals will surely push for a large membership in the united society.

Canadian Beedom.

Preparation of Bees for Winter.

It is not any too early in this part of the world to begin planning and arranging for next winter. Whether the bees are to be wintered in the cellar or on the summer stands, the first and most important matter to be looked after is the supply of stores. Whenever there is feeding to be done, it should be done early. Generally speaking, the advice is to feed during the month of September. I feel sure that this is not good advice. Even though the weather is warm enough to admit of the bees accepting and storing what is fed to them, be it honey or sugar syrup, one very important advantage of feeding is lost by deferring so late, and that is the rearing of brood well into the fall. Bees are more provident and sagacious in this matter than human beings. They will not go on and rear a lot of young if the food-supply is short. So in order that a colony may go into winter quarters strong in young bees, feeding must be done early enough for brood to be reared and matured in vigor before the advent of cold weather. Even when September is a good feeding month, there is not time for a force of workers to be properly nurtured before chilly weather begins to induce the semi-torpor which is the first stage of the bees' own preparation for winter.

Dr. Gallup is quite right in saying on this point (page 438) that if September is a good working month only a few of the bees reared in August will be alive the end of April. This applies to localities further south, where there is a good fall flow of honey, but there are few sections in Canada where there is any appreciable honey harvest in the fall of the year. Practically, the honey season is over with us by the end of July. There are a few localities, where buckwheat is raised, in which this remark does not hold good. But, for the most part, honey-gathering ceases by the end of July. On the failure of out-door supplies the bees intimate in some way to the queen that there must be no more increase in the family, and gradually egg-laying comes to a stop. If the hive is well stocked both with brood and stores, there is a subsidence of activity and a cessation of brood-rearing. By the middle or end of August all the young brood is matured and in full strength, having had enough field exercise to develop, without wearing out their normal powers of flight and work. Then as the nights begin to get chilly, and bad weather occasionally prevails, the bees become quiet, glide into inaction, and compose themselves for their long sleep, if sleep it be, or for that condition of wakeful lethargy which is favorable for wintering in the best possible manner. If this is a correct statement of the case for Canadian beedom, it follows that September is too late for feeding to be done to the best advantage.

I would rather counsel bee-keepers to ascertain the condition of their colonies as to winter stores at the close of their honey season, whenever that is, and do their feeding forthwith. I am inclined to think that the fierce and eager craving for stores which leads to bees pestering housekeepers in fruit-preserving time arises from a sense of the food-supply being insufficient, and is really a frantic and desperate effort to make up the deficiency of which they are conscious. During the honey season, when there is a copious flow of nectar, housekeepers are not thus annoyed. So of robbing. There is none of it when there is plenty of nectar throughout "all outdoors." Bees are less inclined to rob when feeding is put off until September. So also are they less likely to take down and store syrup. It is very easy to institute precautions against robbing, by feeding only in the evening, and using wire-cloth at the entrances of the hives to give ventilation without leaving more than a single bee-space or so during the daytime. It is every way better to feed early, thus calming the anxiety of the bees for more stores, and giving the bee-keeper the satisfaction of knowing, in good time, that his bees are "ready, aye ready" for their winter ordeal.

There will be a large amount of feeding required the present season if bees are to be preserved alive. It is the height of cruelty to let any colonies die of hunger. If a bee-keeper has more colonies than he can afford to feed, he should select as many of the best as he can support in comfort, and sulphur the rest. Suffocation with brimstone is an easy method of dying. The bees are gradually stupefied into a sleep that knows no waking. But death by starvation is a barbarity from which every humane mind shrinks. I do not believe with Cowper, that the poor beetle we tread upon,

> "In corporeal suffering feels as great a pang
> As when a giant dies."

Neither do I think that it is as horrible a thing for a bee to starve to death as it is for a human being to suffer that fate, but if a colony cannot be fed and kept in comfort, by all means let it be brimstoned forthwith and put out of its misery.

I make the suggestion for what it is worth, that it might be well for those who have more colonies than they can afford to feed, to advertise them at cheap rates, explaining to buyers that they will need feeding, that they have only stores enough to last a little while, but that they may be readily fed up so as to winter safely, and come out in strong condition next spring. At the present low price of sugar, it will pay one who wishes to get cheaply into bee-keeping, to buy some weak colonies and feed them up, say at a dollar per colony. Of course it would be better for the bee-keeper himself to spend that much in prolonging the lives of his bees, if he can find a way of doing it.

UPWARD VENTILATION AND SEALED COVERS.

I shall only add at this time a few words on upward ventilation and sealed covers. I do not pin my faith absolutely to either. A very small amount of upward ventilation appears to be quite harmless and perhaps beneficial. But much of it makes the bees more or less uneasy, increases the consumption of food and adds to the accumulation of feces. Sealed covers, on the other hand, lead to condensation of moisture to such an extent that it often drips from the entrance, if the floor of the hive inclines outward, or accumulates on the bottom-board, if the inclination is the other way. If sharp, freezing weather comes when this moist condition of things exists, the walls of the hive, outer combs and floor will become icy, giving the bees chilling surroundings, that cannot but be most detrimental to them. I have settled down for my own part on using a woolen blanket or carpet cover, and on top of it porous and absorbent material, such as old newspapers and pamphlets, or sawdust, chaff, cut straw and forest leaves. The woolen material next the bees conveys the moisture to the other side of the piece of blanket or carpet, where coutact with the absorbent material causes it to pass upward, so rendering it harmless to the bees. I suppose there is the slightest possible upward ventilation, a sort of slow percolation of air and moisture, but it works well, provided the entrance of the hive is not too narrow and contracted.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

The Uphills and Downhills in Bee-Keeping.

DEAR DR. BROWN:—Through the American Bee Journal you may take the idea that I am a Texas bee-man. You may be right, as I keep about 100 colonies, more or less. The number changes like the fall and rise of the hygrometer; from 100 it may fall to 80, from 80 to 120, but with not much honey, nearly at all seasons. You may see by this that my method of *keeping* bees is *sui generis*. You would naturally ask: "By the heavens, what is the matter?" As a christian gentleman the inquiry would be well put; for they are heavenly influences (say nothing of a personal character) that make the bee-business with me a financial failure. This heavenly blight is the aridity of our climate; not only in the bee-business, but of nearly all others except the onerous tax business, and the land business, that periodically prospers here on the patronage of foreign "fools."

I keep bees because I love them, and often make them instrumental to all sorts of experiments. My experience in the bee-line is prodigious, and I believe I could tell you more about apiarian failures than any one in the fraternity. My present stock is from three colonies; but in a land of the living I should be monarch of a thousand queens, with at least two billions working subjects to increase the store of my wealth.

In the *debut* of my bee-enterprise I expended money liberally on it; and to look at the systematic array of my hives, nicely painted, and artistically numbered, nestled within a cool (?) grove, the sight is one to excite admiration. My apiary is really a bower of delight; but not profitable, and to tread with peaceful intentions among a hundred queens, each guarded by a terrible army of many thousand, is the "sweet

emotion of bravery" I daily enjoy. But as to their present management—with old age stealing on me, taking nearly all physical vigor out of me, except in spirit, that refuses in its exhilarance to march hand in hand with waning age, I necessarily instituted a new system of bee-keeping; that is, I *keep* them, and not much more. I cease to feed them, no longer give them foundation, let them enjoy the heat of the summer, and the cold in the winter *ad libitum*, freely divide my swarms to the glory of the forest. But I neglect them not *in toto*. To maintain them in a good condition, I allow them double the ration they need, and so practicable I am, that at times I pile up a stack of stories, to keep them at work, to prevent swarming, to make colonies strong, and to effect them to kill the moth themselves. The whole affair is a sort of a self-acting and self-sustaining arrangement, with only now and then a touch of a master's hand—for the sake of an apiarian respectability, for I have a horror of slovenliness.

In referring to some of the back numbers of the Bee Journal, you will find on record some of my bee-inventions, a few of which I have materially improved, and will bear further notice. In the issue of Dec. 5, and Aug. 8, 1888, the rack holding my smoker is now permanently fastened to a gallon tin paint-can, and, in using it, it is simply hooked to the side of the hive, in a manner so that the current of air will draw the smoke over the top of it. The arrangement is very efficient. It gives no excess of smoke, the bees are promptly driven down; there is no dust, ashes and soot that will soil the honey, and, what is of special value, it is automatic, and gives free use of both hands. I have used no other smoker since 1888, and wish nothing better; and as to the cost of making it, we might call it the "dime smoker." To regulate the ignition, use a tin cover with a wooden handle. In a dead calm of air, I at times use this cover to fan the smoke over the hive; and for preliminary smoking at the entrance, if the air is not propitious, I give a few whiffs of smoke with the fan. Let me privately tell you, if the bee-fraternity knew the merits of this smoker, they would discard all others.

I likewise, in the same number of the Bee Journal, gave my method to keep the frames of hives a proper distance apart; by driving wire nails into each end of the frame from the outside. It is a very efficient plan, but it requires too much tinkering; and now I simply use the two-pointed carpet-tacks. They are of the right size, and when once placed between the frames, will require no further attention. I have to say with a heartfelt gratitude: Blessed the man that invented the two-pointed tacks!

With this communication I will send you a paper where the press herald me as a "great inventor." I admit the subject, but protest against the adjective. But I will say, of many of my inventions, confined in the different departments of science, there are some that don't give me near the satisfaction that I feel in the two very simple ones mentioned above. Often an invention is valuable, where efficient effects are brought about by simple means. Yours truly,

Austin, Tex. G. P. HACHENBERG, M. D.

Among the Bee-Papers

AMOUNT GATHERED BY BEES IN A DAY.

According to the observations of Schachinger, a Hungarian priest, when 20,000 bees gather in a day 8.83 ounces of honey, 30,000 bees gather three times, 40,000 eight times, and 50,000 twelve times as much. The data of these observations are not given.—Review.

EFFECT OF TEMPERATURE ON BEES IN WINTER.

That is a suggestive thought on wintering which Dr. Miller brings out in Gleanings. When the air in our living-rooms is very impure from lack of ventilation we shiver at 70°; but when the air is perfectly pure and crisp we feel warm at 65°. This is very probably one reason why zero harms out-door bees less than 32° harms cellar bees.—E. E. Hasty, in Review.

ARTIFICIAL INCUBATION OF QUEEN-CELLS.

The subject of artificial incubation of queen-cells is very old. Under the heading of "Lamp Nursery," in the old editions of our "A B C" book, away back in 1878-79, there are full particulars on this subject; but there are very few queen-breeders, if any, who now use artificial heat for hatching cells. What are known as "hatchers"—a series of queen-cages put down between the frames, or on top of them, over a powerful colony—is preferred. These little cages contain a single cell; and the heat arising from the cluster is sufficient to hatch them. Of course, the natural heat of the colony is far superior, more regular, and better in every way, than anything that can be supplied by artificial means.—Gleanings.

CRIMSON CLOVER AS A HONEY-PLANT.

Crimson clover, sown the middle of August on the writer's experiment plot, commenced blooming the first of May and ripened its seed early in June. For four weeks the honey-bees hummed joyously over its beautiful blossoms. Wherever it can be grown, crimson clover is a honey-plant of great value. It is the first of all the clovers to bloom. Where the bee-keeper has white clover or Alsike clover, he can add one month, at least, to the length of the honey harvest by a field of crimson clover.—Farm and Fireside.

GETTING RID OF ANTS.

To get rid of the small ants, find their nest if possible. Make a hole through the center of the nest with a crowbar, and pour in about half an ounce of bisulphide of carbon, which you can get at your drug-store. Quickly cover the hole and it will destroy the nest, ants and all, but it will not kill vegetation. If you cannot find the nest, put a little molasses on a board, poisoned with strychnine, or some other poison. Put this in a place where only the ants themselves can get at the sweet. This will kill them as they make their visits; but of course the better way is to get at their nests.—Gleanings.

DAMPENING SECTIONS FOR FOLDING.

Sections, from being kept in a dry place, become so brittle that many of them break in folding. The best remedy is to put them in a damp cellar a few days before folding them. If there is not time for this the usual practice is to wet the grooves. S. E. Miller, in the Progressive condemns this plan, as it causes the sides of the grooves to swell, thus increasing the strain on the part that bends. He recommends the laying of a dozen or more sections on a table, the grooves being turned down, then with clear water and a small brush wet them just back of the grooves. The sections can then be piled up and another lot laid down and wet. My remedy would be to use four-piece sections.—Review.

CERESIN FOUNDATION.

It is generally supposed that this country is at the head in matters of adulteration, but I doubt whether any firm in this country makes a practice of manufacturing foundation from anything but genuine beeswax, and certainly they would not advertise foundation of any other kind. Here's something from Karl Mathey, in Gleanings:

I reproduce the following, simply to show that foundation made from ceresin is publicly sold in Germany:

"The undersigned firm offer ceresin foundation in their price-list, together with that made from pure wax, on the following grounds:

"1. The amount of beeswax produced, when compared with that of honey, is very insignificant, being scarcely 5 per cent. of the latter.

"2. The cheaper foundation made of ceresin, whether the extractor be used or not, and be the honey harvest never so good, is decidedly conducive to an increase in the net amount of honey produced as compared with the use of foundation made from pure beeswax.

"3. The price of beeswax must fall more and more—that is, come nearer to that of ceresin, and that is only a question of time—or else the use of ceresin and other kinds of wax will become more and more common. But if it does become cheaper, then the use of ceresin for foundation will be discontinued.

"4. No man, either officer of the law or a private citizen, can control or hinder any one of the thousands of bee-keepers of Austro-Hungary in the use of ceresin foundation, whenever and wherever he pleases, whether it be made by means of a plaster-Paris or wax mold." BARON ROTHSCHUETZ.

Weixelburg, Austria.

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

A Stinging Reply.

(In four parts.)

PART 1—"By jove, this must be the very place where Miss Constance said she would leave the message that would seal my fate."

PART 2—"Ah, yes; I can identify the tree by the characters upon it. The letter must be inside."

PART 3—"To be or not to be?—that is the question."

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THE BEE-KEEPER'S GUIDE:

—OR—

MANUAL OF THE APIARY.

—BY—

PROF. A. J. COOK.

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GEORGE W. YORK & CO., 56 Fifth Ave., CHICAGO, ILLS.

Convention Notices.

CALIFORNIA.—The next meeting of the Tulare County Bee-Keepers' Association will be held in Visalia, Aug. 14, 1895. All interested are invited. J. E. YOUNG, Sec.
Visalia, Calif.

TEXAS.—The Texas State Bee-Keepers' Association will meet at Greenville, Tex., Aug. 21 and 22, 1895. Good premiums are offered for best exhibits. All are invited to attend.
Deport, Tex. W. H. WHITE, Sec.

ILLINOIS. — The annual meeting of the Northern Illinois Bee-Keepers' Association will be held at the residence of O. Taylor, in Harlem, Ill., on Tuesday, Aug. 20, 1895. All are cordially invited. B. KENNEDY, Sec.
New Milford, Ill.

TENNESSEE.—The next annual meeting of the East Tennessee Bee-Keepers' Association will be held at Mulberry Gap, Tenn., on August 16, 1895. The members are urged to attend and all bee-keepers are invited to be present. H. F COLEMAN, Sec.
Sneedville, Tenn.

WISCONSIN.—The Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting at Platteville, Wis., Oct. 8 and 9, 1895. "Come, every one." Don't get discouraged if we haven't got a crop of honey. We will have a good time at Platteville, just the same Bring your wives and daughters with you. Many interesting subjects will be discussed. M. M. RICE. Sec.
Boscobel, Wis.

Wants or Exchanges.

This department is only for your "Wants" or bona-fide "Exchanges," and such will be inserted here **at 10 cents a line** for each time, when specially ordered into this department. Exchanges for cash or for price-lists, or notices offering articles for sale, will not be inserted here—such belong in the regular advertising columns, at regular rates.

TO EXCHANGE—Bees and Queens for an Organ. F. C. MORROW,
27Att Wallaceburg, Ark.

TO EXCHANGE—Lossing's "Civil War in America" (3 vols.), for Honey. Address,
J. C. YORK, Alliance, Ohio.

Market Garden.—The June number of the "Market Garden," published by the Market Garden Co., Minneapolis, Minn., is a special number on the construction of vegetable greenhouses. Anyone interested in this industry may have a sample copy free by mentioning this paper.

North American Bee-Keepers' Association

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PART 4—! ! ! ! ! [—*New York Herald.*

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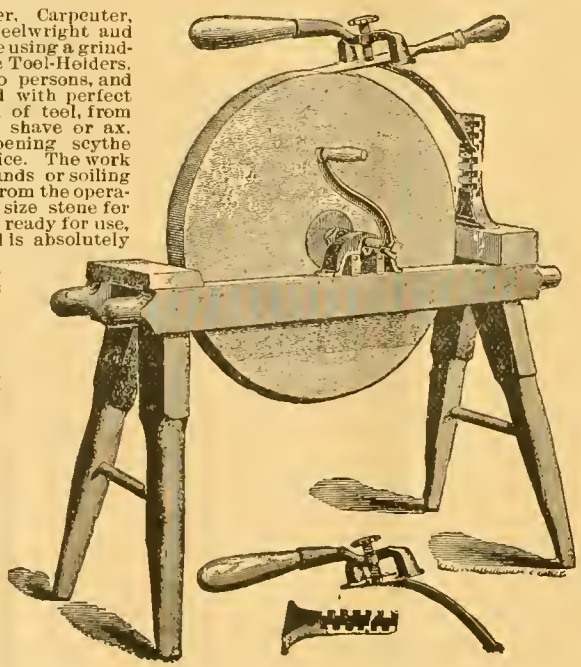

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General Items.

Small Nails for Spacing Frames.

I think the idea is a good one, to hold the frames in position a certain distance apart in the hive ready to receive the new colony of bees. I only put nails in the top-bars, thinking that nails in the bottom-bars might injure the sides of the combs if I wished to take out a central frame.

I use a plumb-bob device to level the ground, or coal cinders, before putting the hive on the spot I want it to occupy in the apiary, and by having the frames hang as perpendicularly as possible in the hive, it will do away with nails in the bottom-bars.

I had several hives ready waiting for colonies to swarm, and I took two of them and put nails in the top-bars at once, and will overhaul all of them fast as I may want them.

T. N. COE.

Clintonville, Ohio.

The Season in West Virginia.

We are having quite a drouth here, and it is cutting our honey crop short. Our white clover is almost a failure. The sour-gum and sumac are just beginning to bloom, which are good honey-plants. Buckwheat bloom is very good for bees, but there is not much raised in this locality. I want to sow some if rain comes soon. Some of my neighbors who keep bees say theirs are doing well at this time, but if it does not rain soon it will be hard on them next winter, unless they are fed. I have increased from 8 to 12 colonies by making nuclei. I do not let my bees swarm, but will not divide any more this season. I commenced with one colony two years ago and have been successful, and have not had to feed very much, but what I do feed, I do it when there is plenty for the bees to work on, so I am never bothered with robbers.

The American Bee Journal is welcomed at my home every Friday evening. My neighbor, C. C. Harter, is going into the bee-business pretty extensively. He has close to 40 colonies, and keeps nothing but pure golden Italian bees.

S. L. DELANEY.

St. Leo, W. Va., June 23.

Heavy Loss in Winter, Etc.

Out of 7 colonies put into the cellar in good condition last fall, I took out 4 weak ones this spring, and they dwindled to 0, so I am out of the business. But I am not alone; bees dwindled badly in this locality. I think fully 60 per cent. of the colonies died between Dec. 1 and May 1, and the rest are mostly weak. Well, it is probably all for the best, as we shall have no surplus without it is from fall bloom. The frosts the last of May killed the basswood buds, and the drouth has ruined the white clover, so that bees are living partly on their stores now.

I wish to say to Mr. E. S. Lovsey, through the American Bee Journal (as others may feel interested in the welfare of honey-yielding plants as well), that of the seeds he sent me I got a good stand of alfalfa and sweet clover, but did not get a single plant of Rocky Mountain bee-plant, though I tried several ways. The alfalfa looks well now, although it is on clay soil which froze 6 feet deep last winter, and we have scarcely any rain this summer. The ground was frozen when the snow left, and I do not remember any rains to amount to anything except on May 30 and June 21.

I could not well keep bees without the American Bee Journal. J. H. DYSON.

Belleville, Wis., June 26.

A New "Bee-Killer."

Some time ago Dr. Miller and Mr. Doolittle indulged in a discussion in one of the bee-papers upon the merits of their respective paddles for killing scolding bees. I

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think one used a wooden paddle and the other a paddle made of wire. I am not sure which came out ahead—I am too busy taking off honey to look it up—but I believe Dr. Miller was on the fence! I send herewith a picture of a paddle I have been using this season, and will tell the readers of the "Old Reliable" how it is made. It combines the lightness and rigidity of the Miller paddle with the swiftness and destructiveness of the Doolittle, and is better than either of them.

Take a shingle about three inches wide—as it is the fashion to use old things for tools for the apiary, I would say, take an *old* shingle—and shave the heavy end down to a convenient handle. With a sharp knife cut a few holes in the other end to let the air pass through when striking at a bee. If the holes are made too large the bee will also pass through and come around and sting the apiarist on the back of the neck. If the paddle is made just right, the yard can be cleared of scolders in a very few minutes. In the hands of an expert it never fails to draw a scolding bee into the vortex.

The handle may be studded with diamonds, if the bee-keeper has an eye for the beautiful! GEO. W. STEPHENS.
Denison, Iowa.

Cold and Drouth—Kingbirds.

I have 13 colonies of bees. One colony died last winter, and one this spring. I have had four swarms. Frost, freeze, and drouth almost destroyed the fruit-blossoms, and white clover honey in this section.

I differ from Mrs. Mate Williams about the "kingbird." She says: "It does not eat them (the bees), but pinches the honey out of them." I have shot numbers of them, and always dissected them, *invariably* finding from 10 to 24 bees in their crops.
W. R. WHITNEY.
Phillipsburg, Pa., June 27.

New Use for a Telephone, Etc.

I have 17 colonies of bees which I run in connection with a small farm, and I have to leave the bees for my wife to watch in the time of swarming. I have a telephone line running over my apiary to one of my neighbors, and when the bees swarm they keep up such a racket by bumping against the wire that they can be heard anywhere in our three rooms, and also at our neighbor's at the other end of the line—60 rods away. If any of your readers doubt this statement, please try it.

It is a very poor season so far here for honey. I have only 4 or 5 colonies that are storing any surplus. Basswood is in bloom, but I do not think the bees gather any honey from it. Motherwort, catnip and mustard are the only honey-plants they work on now. We hare having the worst spring drouth that was ever known in southern Michigan. S. A. RAYMOND.
Bonney, Mich., July 3.

The Season—Spring Feeding.

As basswood has just bloomed its last for this year in this locality, I thought I would give my experience. Last year the season was extremely dry, and we got no surplus honey to speak of, but last fall the white clover got such a start that I felt sure of a good honey year in 1895, and so it proved, for of all the springs I ever saw, the past was the most beautiful, but only for a season, for in the midst of its glory came the ten days of frost and cold winds, that put everything back, and destroyed the fruit so that instead of swarming as the bees intended, they had to stay in their hives and use up what they had gathered in the sunshine. But next to the frost came dry weather, which dried up the clovers, withering the blooms and preventing more from appearing, so in May, when we should have heard the happy hum that proves that honey is coming in, our bees were disheartened and staid in the hives.

To go back a little: On April 11 there appeared Mr. C. Davenport's valuable article on spring feeding, which impressed me as of great value. I read it carefully, but feared to follow its teachings, lest I should not only lose a crop of honey, but lose money and time in feeding sugar; but day by day, as the dry weather continued, I felt something must be done, so I got 100 pounds of sugar, and commenced to feed in jelly-glass feeders in the supers, all the colonies that were not strong, and a few that were, so that brood-rearing was not interfered with. (I can assure you I got no encouragement in the house to throw away my good sugar on the lazy bees.)

About June 20, basswood began to bloom (we have not as much as in the past, for the timber is fast disappearing), and the bees, to get a move on them, after they had worked a day or two, I took away a weak colony that was beside a strong one, causing the working bees to put their honey in the strong one; it seemed to work so well that I did the same with others, getting a few very stroug colonies, and obliging them to store honey for me in the supers. It also gave me a lot of weak colonies that are doing nothing. At the end of 10 days the basswood honey-flow was over, and I have a nice lot of partly-filled sections, but none completed. Now comes the lesson: If instead of feeding 100 pounds of sugar, at 5 cents per pound, to the weak colonies, I had fed 3 or 4 hundred pounds, and caused the bees to almost fill the brood-nest with sugar syrup, they would, at the beginning of the basswood honey-flow, have gone above and stored three times the value of the sugar in nice honey. I feel sure Mr. Davenport has the right idea, for a locality and a season like this. Now, so far as we can see, there will be nothing for the bees to gather this year but what they have got at the side of the roads and fence corners. E. B. ELLIS.
Cooksville, Ill., July 4.

Old & Scarce Bee-Books

—FOR SALE—

Huber, $3; Reaumur, $6; Wildman, $6; Butler, 1634, (Phonetic, rare), $20; Pictorius, Latin, 1563, fine copy, $5; Hill, 1608, $5; Warder, 1749, $5; Maxwell, fine and rare, 1747, $7; Bonner, good, $5; Mills, 1766, $3; Thorley 1774, $4; Keys, an able work, $4; Howatson, excellent and rare, 1827, $3; Bevan, valuable to all bee-keepers, 1827, $4; Munn and Hunter, very rare, one book, $3; Mackloskie, Covilland, Briant, one, $2; DeGelieu, $1.50; Shuckard, British Bees, $4; Cotton, $3; Jardine, Sir Wm., $3; Nutt, $3; Huish, 1842, $3.

French Works — Della Rocca, 3 vols., $6; Frarlere, has Prokopovitch's hive, $2.

German Works — Shirach, 1789, a great work, $5; Riem, extremely rare and valuable, Dresden, 1798, $5.

These book are of great interest to all students of apiculture everywhere. Write for any work on Bees you want. U. S. money and stamps taken. **W. K. MORRISON,**
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Honey & Beeswax Market Quotations.

CHICAGO, ILL., June 7.—We have our usual dull season which we look forward to and expect. Honey is entirely forgotten during the months of June, July and August. The market is pretty well cleaned up of all grades of honey, so the prospects are encouraging for the coming season. We are getting 13@14c. for light comb. J. A. L.

CHICAGO, ILL., May 23.—The trade in comb honey is very light at this time of the year—as it is between seasons. Soon we will get the new crop, and it will come on a bare market. Just now what little comb sells brings 14c. for the best grades. Extracted, 5½@7c. All good grades of beeswax, 30c.
R. A. B. & Co.

CINCINNATI, O., July 8.—There is a good demand for extracted honey at 4@7c., with a small supply on the market. Demand is fair for choice white comb honey at 12@14c.

Beeswax is in good demand at 25@30c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, MO., July 20.—Old stock of honey well cleaned up. Some new comb on the market. We quote: New comb, No. 1 white, 1-lbs., 14@15c.; No. 2, 12@13c.; No. 1 amber, 12@13c.; No. 2, 10@11c. Extracted, white, 6@6½c.; amber, 5@6c.

Beeswax, 22c. C. C. C. & Co.

PHILADELPHIA, PA., June 18.—The new crop of comb honey is arriving slowly, and is in fair demand. No new extracted honey has arrived in this market as yet. We quote: Comb honey, 9@13c. Extracted, 4½@6c.

Beeswax is still declining. The adulteration of beeswax has demoralized our market this spring, and has hurt our sales considerable. Price, 25@27c. W. A. S.

NEW YORK, N. Y., July 6.—The market is about bare of comb honey and there is no demand at the present. The market is quiet on extracted. Demand is limited, with plenty of supply arriving to meet the demands and more. We quote: California, 6@6½c.; Southern, choice, 60@65c. per gallon; common, 50@55c. per gallon. Beeswax is declining and selling at from 29@30c. at present, but the indications are that the price will decline still further. H. B. & S.

MUTH'S HONEY EXTRACTOR PERFECTION **Cold-Blast Smokers,**

Square Glass Honey Jars, Etc.

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HILDRETH BROS. & SEGELKEN, 120 & 122 West Broadway
CHAS. ISRAEL & BROS., 486 Canal St.
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Buffalo, N. Y.

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Queens, 75 cents, or two for $1.00.

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QUEENS!

Now ready by return mail, reared in full colonies from the best honey-gathering strains in America, at the following very low prices:

Tested.....each	$1.50
" per ½ dozen.....	8.00
Warranted purely-mated.....each	.75
" per ½ dozen.....	4.25
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If you want **Queens for business,** get my old reliable strain. 40-p. descriptive Catalog Free. **W. W. CARY, Colrain, Mass.**

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FOR Extracted Honey!

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I will send a Guaranteed 5-Banded Yellow Queen, bred from a Breeder selected from 1000 Queens (some producing over 400 lbs. of honey to the colony); or a 3-Banded Italian Leather-Colored Queen direct from a Breeder imported from Italy. Oct. '94—**at 75c.,** and a special low price for a quantity.

My secret is to sell an extra-large amount, which enables me to sell at low prices. Will run this spring 350 Nuclei—have 1 home and 4 out apiaries. No Queens superior to my Strain.

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Either 3 or 5 Banded, 60c. each; 6 for $3.25. Give me a trial. I can please you. Catalog free.

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Quality always the best. Price always lowest.

Working Wax Into Foundation by the lb. **a Specialty.** I can make it an object for you in any quantity, but offer special inducements on straight 25 or 50 lb. lots. Or for making large lot of Wax into Foundation. I am furnishing large Dealers, and can also please you. **Beeswax taken at all times.** Write for Samples and Prices, to

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Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Amount of Honey Used by a Colony in One Year.

Query 981.—How much honey does a colony of bees need a year for its own consumption? I mean for the whole year, not merely for winter.—Pa.

Eugene Secor—I don't know.

W. G. Larrabee—I don't know.

W. R. Graham—About 100 pounds.

E. France—I don't know, and won't guess.

Mrs. L. Harrison—Who can tell? I cannot.

G. M. Doolittle—I estimate about 60 pounds.

P. H. Elwood—I don't know. Ask the experiment stations.

Wm. M. Barnum—About 50 pounds. Perhaps a trifle more.

Prof. A. J. Cook—I do not know, but would guess 60 pounds.

J. A. Green—I could only guess at this. Probably 60 to 75 pounds.

J. M. Hambaugh—I do not know, but at a rough guess I will say 80 pounds.

Rev. E. T. Abbott—I do not know. It would depend upon the size of the colony.

H. D. Cutting—All it can get, and in many localities you will have to feed to keep them.

Rev. M. Mahin—I do not know, and at best those who know more about it can only guess,

Dr. C. C. Miller—I don't know. Look at Doolittle's answer. Here's a nut for Experimenter Taylor.

B. Taylor—That depends upon the size of the colony, the length of the winter, and other I cannot answer.

Chas. Dadant & Son—This is almost impossible to answer, as all depends upon the quantity of brood reared.

C. H. Dibbern—There is no way to tell just how much honey bees consume in summertime, therefore I must say I don't know.

Dr. J. P. H. Brown—There is too much depending in this question to give a correct answer. This answer would be guess-work.

R. L. Taylor—I don't know, and I would give a fine present to anyone who would tell me a way by which I could find out for certain.

Mrs. J. N. Heater—I do not know. There are so many things to consider in answering this question, which must of necessity be but a guess.

Jas. A. Stone—I do not see how that could be estimated, as they certainly take a part of what they gather while at work, so it would have to be considered—how much of the time they are at work.

Allen Pringle—That is a question to be guessed at, but we might figure a little thus: In this climate from November 1 to the end of February (4 months of "masterly inactivity"), 5 pounds will do. The two months immediately preceding these and the two immediately following them (4 months) of say 4 times the activity equals 4 times 5 equals 20, plus 5 equals 25 pounds. The other 4 months of very stirring times, say 8 times the activity, equals 8 times 5 equals 40, plus 25 equals 65 pounds in a year. Of course I would not swear to that.

J. E. Pond—I pass. From 10 to 25 pounds will carry a colony through a long winter, but in the summer bees are at work, and I don't know of any rule by which even a guess could be made. To attempt to answer would, in my opinion, be a mere matter of guess-work.

G. W. Demaree—The amount of honey consumed by a colony of bees in the course of a year is necessarily an unknown quantity, because the number of bees reared by the colony in a year is not a fixed number—some queens are more prolific than others. At best, only a crude approximation is possible, and nothing gained by that.

Globe Bee Veil

By Mail for One Dollar.

Five cross-bars are rivited in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through.

It is easily put together and folds compactly in a case, 1x6x7 inches, —the whole weighing but 5 ounces. It can be worn over an ordinary hat; fits any head; does not obstruct the vision, and can be worn in bed without discomfort. It is a boon to any one whom flies bother, mosquitos bite, or bees sting.

Nets, 50 cts. each.

☞ This Veil we club with the Bee Journal for one year—both for $1.75; or give free as a Premium for sending us 3 New Subscribers to the Bee Journal at $1.00 each.

GEORGE W. YORK & CO.,
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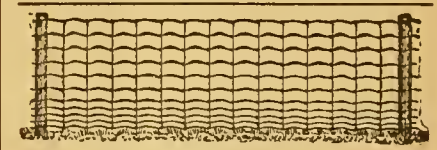

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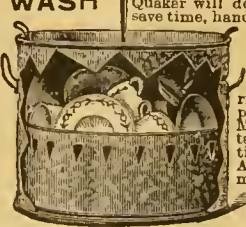

No need of it. The Faultless Quaker will do it for you and save time, hands, dishes, money, and patience; no scalded hands, broken or chipped dishes, no muss. Washes, rinces dries and polishes quickly. Made of best material, lasts a lifetime. Sell at sight. Agents, women or men of honor desiring employment may have a paying business by writing now for descriptive circulars and terms to agents.

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If you do not sell the honey? That's what we are here for. Get our high prices before selling.

C. R. HORRIE & CO.,
Commission Merchants,
224 South Water St., Chicago, Ill.
Reference—First National Bank. 24A13
Mention the American Bee Journal.

I ARISE

TO SAY to the readers of the BEE JOURNAL that

DOOLITTLE

has concluded to sell —BEES and QUEENS— in their season, during 1895, at the following prices :

One Colony of Italians on 9 Gallup frames, in light shipping-box	$7 00
Five Colonies.....	30 00
Ten Colonies.....	50 00
1 untested queen.	1 00
6 " queens	5 50
12 " "	10 00
1 tested Queen...	$1 50
3 " Queens.	4 00
1 select tested queen	2 00
3 " " Queens	5 00
Select tested queen, previous season's rearing..	4 00
Extra Selected for breeding, THE VERY BEST..	6 00

About a Pound of BEES in a Two-frame Nucleus with any Queen, $2.00 extra.

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☞ Circular free, giving full particulars regarding the Bees and each class of Queens.
Address

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HONEY QUEENS!

Have been carefully bred for producing comb honey for the past 18 years, and by a special method for producing large, long-lived, prolific Queens. Can furnish either 3 or 5 Banded stock, bred in separate yards. 3-Banded bred from my own or Imported Mother. No foul brood or paralysis. Warranted Queens, purely mated, 60 cts.; Tested, $1.00; Selected Breeders, $2.50. Discount on quantities.

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Until further notice I will furnish **COMB FOUNDATION** as follows :

10 lbs. Heavy or Medium Brood Fdn.	$3.50
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W. J. Finch, Jr., Springfield, Ill
28A13 *Mention the American Bee Journal.*

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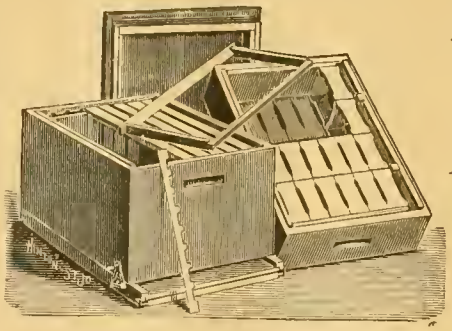

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Emerson T. Abbott,
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Mention the American Bee Journal.

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Was first offered for sale. The followiug parties keep it in stock and have kept it for years for sale. Why ? Because they waut to handle only the best goods, and they say they get the best goods when they buy Dadant's Fouudation:

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Page & Lyon, New London, Wis.
La. Bee-Keepers' Supply Co., Donaldsonville, La.
E. F. Quigley, Unionville, Mo.
G. K. Hubbard, Fort Wayne, Ind.
L. Hanssen, Davenport, Iowa.
C. Theilmann, Theilmanton, Minn.
E. C. Eaglesfield, Berlin, Wis.
Walter S. Pouder, Indianapolis, Ind
E. T. Abbott, St. Joseph, Mo.
J. M. Jenkins, Wetumpka, Alabama
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J. W. Bittenbender, Knoxville, Iowa.
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Is not such a steady trade a proof of real merit in the goods we sell ?
We also make a specialty of **Veils and Veil Stuffs** of best quality.

BEESWAX WANTED AT ALL TIMES.

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CHAS. DADANT & SON,
Mention the American Bee Journal. **HAMILTON, Hancock Co., ILL.**

3-Frame Nucleus and Italian Queen —$2.50.—

Untested Queens, 75c.; Six for $3.50.
Discount on Quantities.

FULL—LINE—OF—SUPPLIES.

I. J. STRINGHAM,
105 Park Place. NEW YORK, N. Y
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PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

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Being the cleanest is usually worked the quickest of any Foundation made

J. VAN DEUSEN & SONS,
Sole Manufacturers,
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Queens Sent Promptly.

Other breeders may Sell Queens cheaper than I do, but they can't furuish better Queeus or fill orders more promptly. Keeping a large number of Queens on hand in nuclei enables me to sell Tested Queens, of this year's rearing, at $1.00 each, or six for $5.00, and to send them by **return mail.** More than six Queeus (tested) will be sold at 75 ceuts each, and will **probably** go by return mail unless the order is unusually large, but I don't promise that such shall be the case when the number ordered exceeds six. As a matter of fact, however, every Order received the past two mouths has been filled the **same day it came.** One Queeu and the REVIEW for $1.50. Samples of the Review free.

W. Z. HUTCHINSON, Flint, Mich.

Notice !

We beg to announce that we have completed arrangements with the Porters whereby we secure for this country the control of the sale of that very excellent and almost indispensable implement—

THE PORTER BEE-ESCAPE.

It will be manufactured by the Porters, as formerly, but write to us for prices in both large and small quantities.

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AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS

35th Year. CHICAGO, ILL., AUG. 1, 1895. No. 31.

Contributed Articles.

On Important Aplarian Subjects.

How to Improve Your Bees Cheaply.

BY JAS. F. WOOD.

This article is intended to help those to requeen their colonies that have either old or undesirable queens, and I trust that many of my brother bee-keepers who cannot afford to buy queens from good breeders will try to discard the queens from all their cross colonies, as well as those that begin to fail from old age. What is more annoying than to extract honey, or in any way handle, a cross colony? I believe all queens from such colonies should be superseded for better stock. I will give a method that I used succcessfully in an apiary of over 50 colonies of black bees.

I selected two of the strongest colonies that I had, and started as many cells as I wished, which I think was about 20 in each hive (20 is all any colony should rear at the utmost limit). These cells were reared from the most desirable colony I had; that is, the one that gave the largest yield of honey, and at the same time were gentle. Here is the point for you to look out for: Be sure to select for a breeder a colony that is above the average as honey-gatherers. You can easily designate your most industrious colonies, even if there is no great flow of honey.

I have not space in this article to tell you how to start cells, but I think others have told this; if not, I think any of the standard books give at least one good method. I will say briefly this: Stimulate your cell-building colonies by feeding sugar syrup every evening until the cells are sealed, and feed liberally. Mark the date that the cells are sealed, and *be sure* to make no mistake.

Now suppose the cells are all sealed, say Aug. 1; on Aug. 6 you should remove all your undesirable queens, and Aug. 7, late in the afternoon, insert a cell in each of the queenless colonies. Now in four or five days examine for cells, and if you find the cell has hatched, and no other cells started, you doubtless have a young queen, when the colony will need no further examination until the young queen is 12 days old. Examine all colonies that you gave cells now, and if you find eggs in abundance in the center of the hive, you may rest assured that colony is all right. Such will be the case with nearly every colony.

Some will doubtless lose their queens when they fly to meet the drones. These queenless colonies should now be supplied with a laying queen. (You can keep the best ones that you remove, caged in full colonies that have queens, and use them to supply what few are missing.)

I have said nothing about controlling the drones while

Wood Lily—(Lilium Philadelphicum).

(Copyrighted by Charles Scribner's Sons, New York.)

"Consider the lilies of the field, how they grow;
They toil not, neither do they spin;
And yet I say unto you, that Solomon in all his glory
Was not arrayed like one of these."

the young queens are mating, which will take place from the third to the eighth day after they hatch. If you have the Alley traps, put them on all but your best colonies, *including the one that you reared the queens from.* There is but little use trying to control the mating of your queens if your neighbors keep bees. However, in my case I allowed only Italian drones to fly, and I had only two colonies that had desirable drones, and I had only *one* queen that produced black bees, out of the 40 odd queens that were reared by the method above.

I practiced this method 13 years ago, just after buckwheat bloom. I Italianized the whole apiary of over 40 colonies of blacks with only a half-dozen colonies of Italians, and the colonies were not in the least injured by being deprived of a laying queen for 10 days after the last flow of honey in that locality.

Do not breed from a colony of hybrids! If you have a good Italian queen, I would use her for a queen mother, but rather than use a hybrid I should select pure black stock, no matter how desirable the hybrid colony. You cannot depend upon the young queens to produce either good workers or gentle bees.

North Prescott, Mass.

What Dr. Miller Thinks.

Planting for Honey Alone.—I admire the courage of R. S. Russell who stands up, on page 456, for planting for honey alone. For one, I shall be glad to be a disciple, if reasonable proof be given of the correctness of his position. Friend Russell, I think others can be got in the ranks with but little coaxing, if you will point them to a successful case of planting for honey alone. Who has succeeded? What did he plant? What can I plant from which I can get enough honey to pay a moderate rent on the land? I'm ready to have the ground occupied, and have tried it more than once, but was regretfully driven to join in the crime of saying, "It does not pay to plant for honey alone." Let's have the answers, Friend Russell, and I'm ready to recant.

Viper's Bugloss.—What the word "bugloss" imports seems in doubt on page 459. The Standard Dictionary gives "bous, ox; and glossa, tongue."

Bees Working on More than One Kind of Plant.—On page 465, W. A. Ditson says he has seen bees go from one kind of flower to another on the same trip. He is undoubtedly correct, but I think I never saw anything of the kind only at a time of scarcity. I half suspect they never work on more than one kind when gathering pollen.

Honor to Whom Honor.—Some of the most vicious work of which I ever knew was the attempt to deprive Father Langstroth of the credit properly due him, but I'm sure he would himself protest against giving him credit to which he is not entitled. Twice within a week I've seen credited to him the maxim, "Keep all colonies strong." Look at the last page of his book, and you will find he quotes from Germany Oettl's golden rule: Keep your colonies strong.

Sweet Clover.—There is so much strong prejudice against sweet clover—a plant as to the future of which I have much hope—that I regret to see anything in the American Bee Journal to help that prejudice. And when I see on page 456, "Sweet clover is a sort of weed," quoted from so good an authority as the editor of Gleanings, I cannot forbear asking Bro. Abbott whether there is not some mistake. For any one reading the item on page 456, is likely to think that the editor of Gleanings has a poor opinion of sweet clover, which is very far from correct. Look at page 462 of the American Bee Journal, and you will see an editorial quoted from Gleanings that speaks in very high praise of sweet clover. In that editorial you will find these words: "Some people call it a weed; but it is an exceedingly *valuable* weed." I wonder if that isn't the sentence to which you refer, Bro. Abbott. You see it makes quite a different impression from the quotation given on page 456.

Does Flax Yield Honey?—From the testimony offered, it seems that flax is a good honey-plant, but, like many another, at some times and in some places bees get nothing from it.

Canada Thistle.—So we're told on page 459 that it's "no more the Canada thistle than it is the United States thistle." Maybe it isn't called "Canada" because it originated there, but because it is common there, just as Kentucky bluegrass is found all over. I think I never heard of a place in the United States where bee-keepers looked hopefully to the blooming of Canada thistle, or where there was enough of it so that they knew anything of honey from it, but Canadian bee-keepers talk of it as a common honey-plant. To say, as is said in Canadian Beedom, "It yields honey of an excellent quality," is as much as to say that the speaker has been across the northern border.

Burnt Sugar.—On page 465, Bert Lownes thinks burnt sugar poisoned bees in the latter part of May. Burnt sugar has long been considered poison for bees if used as winter food, but, like some other things, as honey-dew, I supposed it was all right if bees were flying daily. If it poisons when bees are flying, that's another reason for being careful about it, and Mr. Lownes will confer a favor by giving any positive information on the subject.

Draining Cappings.—On page 454, Chas. Dadant tells about draining and then washing cappings. When I used to extract some, I left the cappings to drain in the cellar, and as all bee-keepers know, the honey became thin there, and the cappings would have little or nothing on them to wash off. Perhaps this is not so good a plan, and I'd like to know what Mr. Dadant thinks of it.

A Grand Soaking.—Northern Illinois has been suffering from drouth, but the middle of July brought a change, and crops are saved. After some good showers previously, a regular soaking came July 18.

Marengo, Ill.

The California Honey Crop for 1895.

BY "RAMBLER."

Editor American Bee Journal—

My Dear Sir:—I note in your issue of July 4, Bro. Brodbeck's signal of distress in relation to the depressed condition of our honey market, and wherein he charges all the evils of low prices to certain writers who have more enthusiasm than discretion about the capabilities of this State. Inasmuch as Bro. B. has in a private letter charged me with being one of the parties who has wrought such havoc, I feel a desire to answer him in a public way in order that we may better understand the situation.

In the first place, about the only utterances that have been made in the bee-journals in relation to a large honey crop in California, was in the early spring, when bountiful rains had fallen, and the flowers were in such profusion as to give a brilliant appearance to the landscape; then Prof. Cook, Dr. Gallup, myself, and perhaps another one or two, in the abundance of our enthusiasm amongst so much beauty, said that the prospect was excellent for a large honey crop. Now, it seems to me that our industry stands upon a very slim basis if we cannot remark up the prospects ahead without ruining the industry. We may be unduly enthusiastic, but our friend

should remember that "one swallow does not make a summer," or one prophecy make a honey crop.

The honey crop of California is now nearly all harvested, and the yield is variously estimated by those competent to judge, all the way from Mr. Brodbeck's one-quarter crop up to half a crop, as compared with the yield in 1893. In this (San Bernardino) county, and, in fact, all along this tier of counties 60 miles back from the coast, the yield is equal to, if not greater, than in 1893. Mr. D. A. Wheeler, of Riverside, from about 900 colonies gets nearly 50 tons; H. E. Wilder, with 120 colonies, gets 12 tons; M. Segars, of San Bernardino, from about 300 colonies gets 20 tons; these apiaries are making up the loss of 1893, and are doing much better upon honey-production than in that year. These are not the big yields that we would like to report, but they help to make up a very passable honey crop, and inasmuch as the Editor sanctions the idea that Mr. Brodbeck knows the true condition of things, while it is implied that the enthusiasts—Prof. Cook, Dr. Gallup, and others—are rather unreliable, I have given the addresses of the above producers in order that my statements may be verified.

I do not wish to convey the idea that I consider Mr. Brodbeck in the least unreliable, for I fully endorse all that the Editor says in relation to his reliability, but there is a chance that he may lean to the dark side of the question as strongly as us enthusiasts (so-called) have to the bright side.

All along the coast the fogs and the army-worm have no doubt greatly reduced the yield, so that the general yield may be about half the 1893 yield; and dealers—notwithstanding Mr. Brodbeck's assertion to the contrary—understand this, and in the San Francisco quotations in last Gleanings, by Mr. Schacht, a dealer, quotes an average crop. And as another encouraging straw I would mention the fact that Mr. Mendleson, of Ventura, has recently sold his amber honey for five cents per pound. I shall claim that enthusiastic utterances in relation to prospects, or even the fact that we have a large yield, cuts but a small figure in the market price of honey.

California may be fortunately located for good average yields, and good quality of honey, but it is an unfortunate feature that its product comes so early in the season—before the Eastern markets are established. Local dealers take advantage of the fact, and depress the price to the lowest limit; the honey that is first sold in this State comes largely from those who are obliged to sell. And why are they obliged to sell? It is from the simple fact that they are unable to pay for their supplies at the opening of the season; the honey-dealer very considerately supplies them, and takes a lien upon the honey for security, and when the honey is harvested, he piles it up in his warehouse at whatever price he is disposed to name. This class of bee-keepers never attend bee-keepers' conventions, and are seldom subscribers to the bee-periodicals, and this class are the real cause of low prices early in the season.

Every bee-keeper in California may set himself to decrying the honey crop, still it would make no difference in the advance of the price of honey. Witness the fact that the season of 1894 was probably as bad as Southern California will ever experience; still, as beautiful comb honey as ever graced the table of an epicure was sold in Selma, in car lots, for only 8 cents per pound, and extracted honey at a correspondingly low figure.

Now what is the remedy for all of this lamentable state of affairs? It seems to me that there is but one resource, and that is, better organization. The subject has been in the dreams of our leading bee-keepers for years; has been talked about, written about, and at present seems to have received a reinvigorating by Bro. Hutchinson's timely articles in the Review.

The great need in California is an organization that will enable every bee-keeper to hold his honey until markets are established. An organization can supply impecunious bee-keepers with supplies, and take a lien upon the honey as well as can an unscrupulous dealer, and banks will ease up the present needs of the producer as soon as the honey is placed in the warehouse; then the organization could secure for him the highest market price.

In order to place our honey where it is needed, or where it will command the best price, we need National as well as State organization; some claim that co-operative stores in various portions of the country would be of the highest utility to the honey-producer. As organized at present, our County, State, and National societies well merit the name of "mutual admiration societies." Our age is intensely practical, and there will not be a general attendance to these organizations unless the producer can see some tangible evidences of benefit. I venture to say that there is not a live society on the continent to-day, speaking in a helpful and practical sense.

I have spent some of my enthusiasm upon our State organization, so also has Prof. Cook and others, but here in the midst of counties where there are hundreds of bee-keepers, barely half a hundred take an interest.

That our Eastern brethren will in the coming North American convention set a dollar and *sense* example for us lesser organizations, is the earnest wish of the

Bloomington, Calif., July 17. RAMBLER.

The Five-Banded or Very Yellow Bees.

BY S. E. MILLER.

I was somewhat surprised at the article on page 378, by John McArthur, entitled, "What constitutes an Italian queen, and a purely-mated Italian queen?" And as I consider the article very misleading, I think it should not pass unchallenged.

Mr. McArthur starts out with an attack upon editors of bee-papers for condemning the so-called golden or 5-banded bees, and then continues in a strain that would lead the beginner to think that these yellow bees are the pure and original Italians. In reply to Mr. McArthur's article, I will quote paragraphs from the same, and then try to answer them.

"If those who are so keen to place barriers in the way of progress, could rear and maintain the yellow race as easily as they can the hybrids they call pure Italians (because their worker progeny show three yellow bands), the yellow race would at once be accepted as the coming bee."

I would say, it seems altogether too easy for the rank and file of bee-keepers (as McArthur terms them) to produce these yellow bees. In the last few years they have sprung up, and are advertised in nearly all parts of the United States and Canada, and apparently there is no trouble, or at least very little, in producing bees as yellow as can be desired; but the verdict of a majority of bee-keepers, who have given them an impartial trial, indicates that the most of these yellow bees are as worthless as they are yellow.

To claim that those who have reported adversely on the yellow bees are prejudiced, will hardly stand, for certainly those who have invested money in them have been led to expect wonderful results from them; have given them extra care and attention, and wished to see them prove themselves superior to the more homely 3-banded or leather-colored Italians.

Not until compelled to, from actual experience, have most bee-keepers been willing to admit that the yellow bees were inferior to the darker Italians.

Mr. McArthur's claim, that we should pay closer attention to the selection of drones for mating, is certainly correct so far, but when he makes the statement that these drones should be perfectly yellow, if we wish to produce pure Italians, I fear he has gone a step too far, and cannot verify his state-

ment by calling on the best informed bee-keepers in the land for their experiences and opinions.

And now comes Mr. McArthur's broadest and most sweeping claims for the yellow bees, "A pure Italian (queen) will produce yellow drones—as yellow as the mother;" and, further on he says, "A purely-mated Italian queen will produce uniformly-marked workers, yellow to the tip, completely so on the under side of the abdomen."

I would now like to ask Mr. McArthur whether he ever imported a queen direct from Italy, that produced such drones or workers, or whether he knows any one that has imported a queen that would produce such. From my experience, and from all that I have ever read on the subject, I have been led to believe that queens imported from Italy produced workers having three rather dull-colored yellow bands, or sometimes called "leather-colored," while the drones of such imported queens are a dark brown color, showing little if any yellow.

If I am correct in this (and I believe nearly every enlightened bee-keeper in the land will bear me out in the assertion), then where do pure Italians come from? From Italy, certainly! But if Mr. McArthur is correct, they must come from somewhere else. Likely from York State, where, in the hands of the originator, I have no doubt they are a valuable strain, but since being scattered over the country, and falling into the hands of careless breeders, who have bred for color without regard to other essential qualities, they have deteriorated until they are a valuable strain to bee-fanciers only.

If any one will take the trouble to look over back numbers of the various bee-papers, and read all that Mr. G. M. Doolittle has written on this subject in the last year or two, I think he will learn where this strain (which Mr. McArthur claims to be the only pure Italians) originated. He will also learn that Mr. Doolittle never made any broad claims for the yellow bees, and never asked bee-keepers to purchase them, but as they nearly all called for the yellowest queens he had, he was willing to accommodate his customers; but that the so-called golden or 5-banded bees are inferior to the 3-banded bees in most parts of the country, can no longer be doubted by those who read the reports concerning them. I would refer the reader to page 490 of Gleanings for June 15, 1895.

In his second paragraph Mr. McArthur says: "If the editors of some of our papers keep up the crusade as they have done in the past, we may bid farewell to the advancement of bee-culture on this line."

If he had put it in this way it would be nearer correct: If editors and others that know the facts in the case, will permit the rank and file of bee-keepers to go on in their mad and foolish race for yellow, instead of honey-producing qualities in bees, we will soon have a strain of bees that will not be worth their keeping to the practical bee-keeper, but to the bee-fancier they will be ornamental, indeed.

Bluffton, Mo.

P. S.—Can't the admirers of golden bees get up a bee-fancier's association, where they could have full swing, and not be bothered by those that keep bees for the honey they gather? S. E. M.

Double vs. Single Walled Hives—Wintering.

BY C. E. MEAD.

When I read the answers to the question about double-walled hives, and saw how many were not in favor of them, I said, "Well, that is the poorest guessing I ever saw in the 'Old Reliable!'" Those in the Southern States who have not been compelled to use a cellar or a double-walled hive to winter safely, are excusable; but those in the North have not tried them in a "searching" winter like the one just past.

Mr. Abbott says that bees do not freeze, but in the long-continued cold-spells they cannot stir to get the honey, and starve—freeze to death—or "come dead" just the same. Had they been packed in a double-walled hive, they would have been warm enough to move about, and would neither starve nor freeze.

For about eight years I have wintered some colonies in two-story hives, on from four to six frames in each hive, according to the size of the colony. I prepare them in September. For five frames, 7¼ inch space in the center between the two division-boards is right; 10-frame hives are best. I place the division-boards equidistant from the sides, with 7¼ inch space in the center; screw a 1½-inch slim screw into the center of each division-board at the back of the hive; drive two 2-inch wire-nails in each board from the front of the hive, but not clear in, and let the heads stick out ⅜, so you can draw them out easily in the spring. Place this body on a bottom-board, and pack solid between division-boards and the side of the hive. With soft clay lute the top of this hive all around. Have a ⅜ or ¼ inch board to lay on top of the frames in the top story. Now put the five lightest frames in the packed hive, with the bees; place the prepared second body on the first hive, and cover the center space, and pack between division-boards and sides as you did the first one. Lute the joints of the top of this hive. Now put the five heaviest frames in this hive, with adhering bees. Put on another body, or two supers; put the ¼-inch board over the frames, and then put in 8 inches of packing. Tack a few old newspapers to the backs of the hives, and then screw on a board that will cover from top to bottom.

Now comes the part which, if neglected, will cause a total failure from dampness, even through the division-boards and the ¼-inch cover. Have the cover project enough so the rain and snow will not blow in, and place ¼-inch strips under it. Let your hive face the south, and they will be all right in the spring. I wintered a 3-frame nucleus on 8 frames in this way—4 in each hive—and they were booming this spring. But the most satisfaction comes through my double-walled hives. How it pleased me to see the first hive I opened in May. One colony that was wintered in a two-story 10-frame hive did not stir enough all winter to let me know whether they were dead or not—10 frames of brood and honey, and more honey than they had in the fall; plenty of drones and queen-cell cups started, and the 20 frames covered with bees. My other double-walled hives, with 10 frame hives at the bottom, and two inches of packing on top, and then the bottom of a nucleus colony in an 8-frame hive, with an opening at right angles with the lower hive, came through in splendid condition. These nuclei had a 2 inch opening 4 inches from the entrance. The bees are placed on the left side of the tier, and the entrance on the right corner.

One of these nuclei I consider as remarkable. It had more bees and honey than in the fall—8 frames solid full of honey and brood, and only dandelion and scanty fruit-bloom to get it from. The lightest nucleus had only three frames with brood in, and I could not see that they had eaten 5 pounds of honey. These nuclei had at least 6 inches of packing over them, and the heat of the big colony about 3½ inches below them makes it so warm that it is necessary to give them as much room and honey as I do. In a bad season they will breed up and starve before it is warm enough to open the hives to see if they need stores. I am not as sure of wintering these small nuclei packed over the strong colonies as I am the big ones.

As I have not lost but one colony in 10 years, in these double hives (and that came through the winter all right, but for some reason the queen died, and she was only two years old), I united them with the nucleus above them. One-half of the bees in the single-walled hives died, and the other half do not compare in strength with the nuclei wintered above

the strong colonies. And the amount of honey consumed is enough more to pay for the double hives in two seasons. I have had to draw young bees from these strong colonies to get the colonies in single-walled hives up to a paying strength.

This way of wintering nuclei is new. But my losses in finding out how, were considerable. And when an astute bee-master, like Mr. Taylor, makes the same mistake as I did, perhaps it is well to state my failures to keep others off of the rocks of failure. I thought I had a sure thing when I tried a long hive with two strong colonies in each end, and a nucleus in the center, with wire-cloth division-boards between colonies. They were very uneasy; in the spring all were dead. I tried double wire division-boards the next winter, and extra strong colonies at the ends, so the bees could not well communicate. One colony survived. I am positive the draft, though slight, chilled and killed my bees. I thought of my present plan, and it is a success.

Now comes Mr. Doolittle, and says double hives are better to winter in the cellar. Well, you can safely follow anything Doolittle says. "Ven he talks, he says somdings efery dimes."

Then comes "North Carolina," and says it pays there, as bees leave the supers in the cold nights of spring, which will apply to most Southern States.

I would like all who have used double and single walled, or packed, hives, to report per cent. of loss in each kind the past winter; and see "where we are at."

Chicago, Ill.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

After-Swarms—Water for Bees—Laying Workers.

1. Bees are still swarming. I had a swarm the other day that got ahead of me. When they settled I went to the old colony to cut out the queen-cells, and I found no cells and no eggs. The brood was all sealed, and a good deal of it was drone-brood. Give me your opinion about it.

2. Is the water that is carried into the hive used in rearing the young bees, or is it for the old ones?

3. Is a laying worker-bee fed the royal jelly through a mistake, or is it through a desire to lay?

When I put on a box and want to know if the bees have gone to work in it, I place my ear close to the box, and if they are not at work in it I can hear them scratching and clawing.

S. R. P., Georgia.

ANSWER.—The swarm that issued was an after-swarm or "cast." Very often after the issue of 2nd, 3rd, or 4th swarms, the hive is left in just the condition you describe. Swarms of this kind are no good, and had better be put back or united.

2. It is used, it is supposed, for diluting the honey and in preparing the food for the young bees.

3. Most likely through a strong desire to lay and perpetuate the existence of the colony. This is the conclusion I have arrived at from my observations, and I have watched hundreds of colonies that contained them.

Should Honey be Extracted from the Brood-Chamber?

I have 25 colonies of bees, and they have 25 to 35 pounds of honey each. Some of the outside frames are sealed from ⅛ to ⅝ down. This honey is in the brood-chamber. Would you extract it or not? Please give me your advice.

A. P. L., South Carolina.

ANSWER.—Whether I would extract or not would depend upon the extent of the fall pasturage. If this was very limited, I would not extract; for July and August are dull months in your section—very little honey is gathered during these months—and if the fall crop is short they will need all they have for winter. But in those locations where there is an abundance of fall flowers, the aster especially, there would be little risk in extracting the honey from all frames that contain no brood.

Some years ago, during the extracting furor, the bee-keeping solons advised all frames containing sealed honey to be whirled in the extractor, regardless of the stage of development of the brood. They told us the whirling did not hurt the brood—that which was partially thrown out of the cell the bees would pull back in position. I followed the crowd, but I soon jumped out of the ranks, for I found that the bulk of the brood was injured by extracting the honey. So now I never extract from frames that contain any uncapped brood; and I am cautious about extracting from those that contain capped brood. If this course is pursued by the beginner, he will avoid the danger of extracting too closely, and his colonies will not be weakened.

The Castor Bean.

I have five acres to castor beans. Is the plant a honey-producer? I notice wart-like excrescences on the stem and leaf stalks, which exude a liquid that seems to be eagerly sought by flies, ants, etc. J. A. M., Seay, Oklahoma.

ANSWER.—I do not think it secretes any honey that is acceptable to the hive-bee. There are many plants that secrete a kind of nectar that is eagerly sought by flies and some species of wild bees, while hive-bees will not touch it. The castor bean, Spanish bayonet (*Yucca filamentosa*), enomomus, and some others, are plants of this character.

Bees Did Only Reasonably Well.

Owing to more engagements than I have been able to keep up with, I have neglected my correspondence with the American Bee Journal, but I love it "all the same," and read it as of yore.

Bees have done only reasonably well in East Tennessee this season. The cold weather in poplar bloom continued for two weeks, and the honey crop from that source was small. Basswood was fair, and my surplus so far is nearly all from it. Sourwood is beginning to bloom, but owing to the very dry weather I do not expect a large yield from it. My crop, taken to date, is 1,100 pounds of basswood and 500 pounds of poplar honey. I have some 200 pounds of basswood honey yet to take. H. F. COLEMAN.

Sneedville, Tenn., July 4.

Rolling in the Honey—Hybrid Bees Best.

Bees in this section were on the verge of starvation until June 20, but they are rolling in the honey. I have 24 colonies that are extra strong.

I have from week to week noticed in the American Bee Journal that the writers praise the 3 and 5 banded bees to the skies, as being the best honey-gatherers; but I want to say right here, that experience has convinced me beyond all doubt, that a high grade of hybrids are the best honey-gatherers in existence. I have two queens that cost me $6.00 each, and two 5-banded queens that cost $5.00 each, and all four of these queens are not worth 20 cents. My brown Leghorn chickens will lay just about as many eggs as these queens.

Fellowsville, W. Va., July 8. B. T. STONE.

The "10 Weeks for 10 Cents" Offer to new subscribers was withdrawn July 15, as advertised. To any received after that date, 10 back numbers of this year's Bee Journal have been sent, and we will renew the offer of "10 cents for 10 weeks" (or 10 back numbers) so long as our stock of back numbers of 1895 holds out. So, to any one sending 10 cents, we will mail 10 different back numbers, all to be since Jan. 1, 1895. Ten of such numbers are just as good for getting a fair idea of what the Bee Journal is, as would be 10 future numbers. The 10 back numbers will all be of different dates, but will not be consecutive numbers.

☞ See "Bee-Keeper's Guide" offer on page 496.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Why Did the Swarm Leave?

I had a very large after-swarm of Italian bees to come out June 20; I hived them in a Langstroth hive, and moved the hive about 40 feet from where I hived them. They hung out of the hive that evening, and went in at night. Some worked the next day, but not many, and part hung out. The next evening, about 4 o'clock, they came out and left for parts unknown. I looked into the hive, and saw they had made three pieces of comb about as long as my hand. What caused them to leave? H. G.

Hickman, Tenn., June 24.

ANSWER.—I cannot say for sure, but bees would act just about as you describe if you set the hive in too hot a place, or give them too little ventilation. It's a pretty good plan for at least a week, to set the hive up on blocks an inch or more.

Importing Bumble-Bees into Australia.

Please tell me through the American Bee Journal when (at what date) there was a successful importation of bumble-bees made into Australia; also from where, by whom, and to what part of Australia they were taken. Do you know for a certainty that there is clover seed now successfully raised there? For certain well-defined reasons I do not believe that there was ever any bumble-bees introduced into Australia, and would like to have definite answers to the above questions. W. S. F.

ANSWER.—Now are you going to smash another of our idols? I don't know a thing about it for sure, and yet I have an indistinct recollection of reading something about the particulars. But I wouldn't like to make my "affidavy" that there ever were any particulars. Brethren, the question is before you. If any one knows the correct answer, let him please arise and recite it.

A Queenless Colony.

One of my colonies has not been working just to suit me since swarming time, and for the last month I notice they have been working in the sections but very little, and only have ⅛ of the frames full. To-day I opened the super, and there was very few bees in it. I then examined the brood-chamber, and to my surprise I found that they were filling up the brood-chamber clear to the bottom—every cell throughout the hive was being filled, and not a young bee nor an egg could be found. The colony did not seem to be as strong as they ought to be for this season of the year. I did not see any queen, though she might have been there. C. S. R.

Metropolis City, Ill., July 9.

ANSWER.—The bees are queenless, and the best thing is to let them alone until the harvest slacks, then kill them and take the honey. If you have any compunctions of conscience about killing bees, give them to some other colony and let that kill them. No young bees have been hatching out, and these are getting pretty aged, so that they'll not live long, anyhow. But when the harvest stops they're likely to be a prey for robbers.

Rendering Combs into Wax.

What is a good way to render old combs into good, salable wax? Also, what form is best to cool it in, to ship? How should it be packed for shipment? I have no wax-extractor.

BEE GINNER.

ANSWER.—I believe it will pay you to have a sun wax-extractor. If you don't want to buy one you can make one. All that's necessary is to have a box with glass over it, and you'll find that when it stands in the sun the inside of the box will be a very warm place. To melt your combs, put in the box an old dripping-pan having a hole at one corner, or having one corner torn entirely open, and that corner the lowest, with some kind of a dish set under to catch the dropping wax. It may be a good plan to have some water in this dish for the wax to drop into. But you'll find that with old, black combs a good share of the wax will remain with the slumgum or refuse.

To get the most out, break up the combs into fine pieces when it's frozen and brittle, then soak it in water for a day or longer before rendering. You see the old cocoons in the cells act as sponges to soak up the liquid wax, and you avoid this by having them soaked full of water.

You can also use your dripping-pan without the aid of the sun, even in the winter time. Put it in the oven of your cooking-stove with the corner projecting out, and the vessel on the floor to catch the dropping wax.

It makes little difference what shape it's in for shipment, only it's well to have it in good-sized cakes, and as clean as possible. Put it in a good-sized pan in the oven of your stove at night, the oven not hot enough to burn it; shut the door, and let it stay all night to cool. That slow cooling gives time for all impurities to settle slowly to the bottom, and you can scrape them off when cold.

"Privet" Is Its Name.

I send a specimen of a bush which grows around my neighbor's lawn, and my bees just swarm on it. Some say it is a medicinal plant. The bush is about 5 feet high, and 6 feet wide. The canes hang down, you know. Is it a good honey-plant? What is it good for medicinally?

Thayer, Ind. A. R.

ANSWER.—I'm not a good botanist, but it so happens that the plant is one with which I was familiar in boyhood in western Pennsylvania, it being exceedingly scarce in northern Illinois. It was called "privet," but the description of privet in the botany says privet has a white flower, and the privet that I knew, and that you send, is decidedly peculiar in the color of its flowers. It has on the same plant flowers that are purple, and others that are—I really don't know how to describe the color—I should say it was a faded mixture of drab and yellow. The two colors are entirely distinct. I know nothing as to its value, either as to bee-pasturage or medicine, but I doubt whether it is of much value in either direction. To be of much value a honey-plant should be in large quantities, and I don't suppose you'd find enough privet to cover an acre in your whole county.

Cotton-Weed—Bees for Comb Honey—Sweet Clover.

1. We have quite a profusion of cotton-weed bloom in this vicinity, which opens with basswood, but continues longer, and bees work it freely even while linden is at its maximum. Now my question: Would you consider it beneficial or not, that is, will the honey gathered from it more than counterbalance its qualities of sticking the legs of bees, some of which are carried out by the others?

2. I am just starting an apiary, and am interested in the best bee for that purpose. I have been experimenting since 1890, and have tried to read up well, but am not yet fixed on the above question, although my experiments so far are in favor of the blacks; pure Italian queens mated with black drones next. I never tried but one Carniolan queen, and they held their own very well as honey-gatherers and comb-builders, but were the crossest ever in my yard, although some of my hybrids serve well in that line. Of course I would prefer a gentle bee to a cross one, if other qualities were equal, but would not lay very heavy stress on temper when honey-gathering qualities are at stake. Now I would like to know which you think preferable for the exclusive production of comb honey.

3. I have been experimenting the last two years with several of the honey-secreting plants, among them sweet clover, which is just coming in bloom from my sowing last spring, and I do not find it as hardy as recommended. What can you tell us of this "fast weed?" This spring I had a plat of Alsike in bloom—the first in this part of the country. It came fully up to my most sanguine expectations.

Alderson, W. Va. G. H. A.

ANSWERS.—1. It would be hard to give a positive answer to such a question. You see it's more or less a guess as to the value of the bees lost by having their feet stuck up, and it's a guess as to the difference in the value of linden and cotton-weed. My guess would be that if the bees work on something else while linden is in bloom, that they find a gain therein,

and I guess the bees lost by it don't count for such a great deal.

2. You can judge of a man's belief by his acts. I work for comb honey, and I try to keep as near as I can easily to pure Italian stock. But hybrid blood works in, in spite of constant effort.

3. One will tell you that there is nothing hardier than sweet clover; that it will grow and flourish in any soil so poor and hard that no kind of grain would live therein. And he's right. Another will tell you that sweet clover is tenderer than oats, wheat or any of the grains. And he's right, too. Drop seed on the hardest soil you like, let it be trodden down by horses, cattle or man, and it will flourish and grow away up big. But it can't stand too much prosperity. I sowed sweet clover with oats one spring, having the ground beautifully prepared. It came up thick, but the next winter it heaved out of the soft ground, and the following spring not a single plant was left. Let your seed be tramped in, in hard ground, and then see if you don't think sweet clover is hardy.

Questions by a Beginner.

1. I hived one swarm, and not knowing any better I poured them in at the top of the hive—the second story. They won't go below. They have been in the hive seven days, and have not come out yet. I feared they'd starve, so I fed them every night. What must I do with them?

2. I had a large swarm last Monday; this is Saturday, and the colony has swarmed again. The old colony was hived on May 23. They have never worked in the top story. The bottom part of the hive is only 10x10x10 inches. I did not have any new hives at that time, and used that small box. I thought to transfer them next spring. This seems odd to me, only a beginner. T. E. R.

Florence, Oreg.

ANSWERS.—1. It's a little hard to say without knowing what your hive is like. If the two stories are just alike, all you need to do is to swap one for the other. If the upper story is small, and communication between the two stories very free, you can leave them just as they are, and when the bees become crowded in the upper story, they will work their way down into the lower. As they fill up next year the brood will in time all be found in the lower story, and the upper story can be removed after it is filled with honey.

2. One thousand cubic inches is all the room they had, whereas they should have double that or more. The queen hadn't room to lay, so they swarmed. Even if there was empty room above, it wasn't to the taste of the queen to occupy it.

Questions on Management.

I started last spring to keep bees. I have seven colonies, five of them doing well, but two have not stored any surplus honey, and I got only one small swarm. One has ten extracting-frames filled, and almost 24 one-pound sections filled already.

1. Those two that have done no work in the sections, I took two full frames of the full hive (extracting-frames) and put one in each of those hives. Did I do right?

2. The colony that has stored so much, makes a great noise at night; it does not seem to me to be a contented hum; in fact, they make more noise then all the rest together. I think that one or two swarms left those two hives early in June, but I don't know for certain. Some of the hives have a large amount of bees on the outside of the hive, and still do not swarm. My bees are very cross; my garden is just alongside of the fence where the bees are kept, and it is almost impossible to work a horse in it. I did have to get up in the morning before the bees were out.

3. I would like to Italianize the whole lot, but I do not know how or when to do so.

4. I have a neighbor that has one colony, and the bees have been out all over the hive for the last month. He asked me to go and see if I could tell him what was the matter. When I tried to take off the top of the hive, I found that there were no frames or boxes on top, but the top was full of honey. What can he do with them? Had he better leave them until next year, or take the honey out of the top and put on frames or sections? W. J. H.

St. Joseph, Pa., July 15.

ANSWERS.—1. It was probably a good thing to take the two frames from the hive likely to be crowded, but it is doubtful if you did any good by giving it to the other colonies so long as they were in no danger of starving.

2. That loud noise at night is all right. The bees are ventilating, and evaporating the nectar they have gathered.

3. You ought to have a good text-book on bees to instruct you about Italianizing and many other things. (See the one offered on page 496.) You can Italianize almost any time when bees are at work. The sum and substance of it is to remove or destroy the old queen and introduce the Italian one.

4. If there is enough room filled with stores below, he may as well take away what there is above, for if everything is entirely full there may be no room for the queen to lay.

Time for Rearing a Queen.

Following your instructions for getting increase of colonies, as given on page 410, I would say that everything is apparently working all right.

On July 4 I made the first division, taking the old queen from hive No. 1. On July 14 (10 days after), when I opened hive No. 1 for the second division, I found a large queen in the hive and several cells sealed over. The colony had supplied itself with a queen in 10 days. I, however, went ahead and made the division as originally contemplated. My question is, will this queen produced in 10 days be all right? An old bee-keeper of my acquaintance says not. He says it will be a very poor queen.

My understanding was that the bees did not take an egg over three days old to produce a queen from, under such circumstances as I have detailed above. But in this case, if it takes 16 days to produce a queen from the egg, the bees must have taken a larva to begin operations with that was three days old, or six days from the time the egg was deposited. What do you think about this? H. P. J.

Ben Avon, Pa.

ANSWER.—If the queen is a nice, large one you needn't worry. I believe it is generally agreed that a larva not more than three days old is all right, the food of all being for the first three days practically the same as that of a queen. After being fed thus for three or four days, the young worker is put upon a less concentrated diet, while the queen goes right on living on the fat of the land. Even if this were not so, are you sure and certain that there might not have been a queen-cell before your intermeddling?

A Swarming Experience.

This of all years has added to my experience with bees. Perplexities confront me on most of the avenues in apiculture, therefore this random letter. We have had one of the most rainy seasons I have ever seen in Colorado at this time of year. The last month has been one continual rain, and yet the bees are swarming to death—only 2 colonies out of 50 but what have swarmed from 2 to 4 times. Of these 2 colonies I have placed four 28-section supers on one, and three 24-section supers on the other, which are full of honey.

I have had a number of swarms after having balled the queen, leave the hive. This is a new experience to me. One-fourth of the new swarms have balled and killed the queens. Can you recommend any remedy?

What would you advise to give the new queenless colonies—a frame of brood, new eggs, or give them a queen?

Denver, Colo., July 13. D. L. T.

ANSWER.—It seem. to me you are having a very unusual experience, and I hardly know what to advise. I believe I should try returning some of the swarms, at least, to the hives from which they issued. If they're dissatisfied with their old queen, possibly they might be better satisfied with a new one, although, as a rule, a laying queen will be preferred to one not yet laying. If you don't care to have increase, it might be a good plan to cut out all but one cell on returning. If you don't cut out the cells you may expect them to swarm with the oldest of the young queens.

I think it probable that you gave a frame of brood to each swarm, otherwise I should expect the bees to return to the old hive when the queen was killed, and I'm wondering just a a little whether the presence of brood might have anything to do with the killing of queens. If they have brood, they have probably started queen-cells, and will take care of themselves in that respect, but you may expedite matters by giving them a young queen just hatched, or a mature queen-cell. It might be the best thing, especially if you desire increase, to put with the queenless swarm one of the weakest colonies that has swarmed. That would furnish a queen, and also supply emerging brood.

The American Bee Journal
ESTABLISHED IN 1861
OLDEST BEE-PAPER IN AMERICA

George W. York, - - Editor.

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Editorial Budget.

Prof. Cook reports having a fine class in entomology at the Chautauqua Assembly now in session at Long Beach, Calif. He also gives general lectures there. On page 461 I gave a full notice of this matter.

Rev. Emerson T. Abbott, we regret very much to learn, has been on the sick list for quite a long time, and fears he may have to do less of writing and other work for a time. I hope he may soon regain his former health. I don't think he "enjoys" poor health any more than other people.

Mr. J. S. Harbison, the once famous California bee-keeper, read an excellent essay at a farmers' institute held at San Diego last month. Mr. Harbison was at one time the most extensive apiarist on the Pacific Coast, and was the inventor of the Harbison hive, which was used largely in California some years ago.

Mr. Thos. G. Newman, ex-editor of the American Bee Journal, intends to be present at the Toronto meeting of North American, Sept. 4, 5 and 6. He will address the convention on "The Past, Present and Future of the Bee-Keepers' Union." It will be a good opportunity for Mr. Newman's many personal friends to meet him again, and talk over old times and scenes.

The Amalgamation of the North American and the Bee-Keepers' Union is one of *the* topics for discussion just now, and should be of particular interest to all, especially to the members of the Union.

While the subject can only be *discussed* at Toronto, and simply recommendations made looking toward uniting the two organizations (if it is favored by a majority at the Toronto meeting), I have wondered if it might not be well to have an informal ballot on the question *before* the meeting of the North American, each member of the Union voting either for or against the proposed new arrangement.

On page 493, of this number of the Bee Journal, it will be seen that a majority of those who expressed themselves in the July Review are greatly in favor of uniting the two societies, as are also the editors of the majority of the bee-papers, I believe. To my mind, there is no question about the advantages to be gained by the amalgamation, to all concerned therein.

Suppose all who are members of the Bee-Keepers' Union, and read the Bee Journal, send a postal card at once to this office, saying whether or not they favor the uniting of the two societies. I will publish them all in symposium style, provided the replies are sufficiently brief. If you wish, you could simply say "Yes" or "No" to this question:

As a member of the Bee-Keepers' Union, are you in favor of making one grand society of the North American Bee-Keepers' Association and the National Bee-Keepers' Union, by uniting them under one management?

Understand, please, that this would not be a final vote—simply an informal ballot—and not at all decisive, or binding upon any one.

Now, if the members of the Bee-Keepers' Union who read the Bee Journal, desire, each can write yes or no to that question on a postal card, sign his or her name, and mail it to this office. If all will do this not later than Aug. 15, we can know something of the feeling of the Union members *before* the Toronto convention, and at very little expense—only one cent per member.

Sugar-Honey in Canada.—Without stirring up any more discussion on the sugar-honey question, I want to reproduce this short editorial found in Gleanings for July 1, on the subject:

It comes to us in a sort of roundabout way that there are some bee-keepers in Canada who are producing sugar-honey—that is, a so-called honey produced by feeding sugar to the bees. There is little or none of that thing going on in this country, I believe, and I really hope there never will be. In Canada, some of the prominent bee-keepers are taking vigorous measures to keep such honey out of the market, and I hope they will, for I cannot believe that the average dealer here, or in Canada, will sell it for just what it is, for then it would not sell at all.

Our Canadian friends are endeavoring to get a law passed on this subject, so as to be able to prevent the sale of sugar-honey as floral-honey over there. It is believed they will succeed. They deserve success in this matter, for they have worked hard for it.

Mr. E. J. Baxter, of Nauvoo, Ill.—a son-in-law of Mr. Chas. Dadant—gave the Bee Journal office a pleasant call a week ago last Saturday. He reports no honey crop this year, making the third failure in succession.

Referring to the late discussion on the subject of strawberries and bees, in these columns, Mr. Baxter said he agreed fully with Mr. Abbott. He has some 80 acres of strawberries in Iowa, and said that the bees fairly swarmed on them. Also, that a near neighbor in Nauvoo, who had a fine crop of strawberries this year (while others had scarcely any), attributed his success to the presence of Mr. Baxter's bees that worked freely upon them during the blossoming period. It begins to look as if bees do pay quite a little attention to strawberries.

Liberal Book Premiums are offered on page 482, for the work of getting new subscribers to the Bee Journal. It is a fine chance to get a complete apicultural library. Think of it—50 cents' worth of books given to the one sending a new subscriber! Remember, please, that *only* present subscribers to the Bee Journal can take advantage of that offer. The publishers of the Bee Journal believe in making it an object for the old subscribers to push for new readers among their neighbors and friends, hence the generous premium offers to them. It is hoped that all may begin *now* to work. Sample copies of the Bee Journal free.

Noms de Plume are not regarded favorably by the Bee-Keepers' Review. Editor Hutchinson says: "Protected by a *nom de plume*, one will be less guarded in utterance; it is too much like talking about a person who is absent; and things are said that would not be said if he were present." May be so.

New Subscribers and Premiums.—Those who send new subscribers will please remember that we do not now offer to give "Bees and Honey" bound in paper to any new subscriber, unless the new subscriber himself or herself sends us the $1.00 for the Bee Journal a year. In other words, we do not now offer two premiums on one new name.

Another thing: In order to secure any particular premium requiring more than one new subscriber, you need not wait until you have all the required new names, but send them in with the money as fast as you get them, and select your premium when sending the last new subscriber in the club. By so doing the new readers will be getting their copies of the Bee Journal right along, and will not have to wait.

Please remember, also, that we cannot furnish back numbers in regular order since Jan. 1, 1895. We have a few odd back numbers left, which we are disposing of in lots of 10 for 10 cents, as stated on page 476. All new subscriptions will begin with the current number when the names are received.

Mr. Henry Sutherland, of Bainbridge, Mich., called at the Bee Journal office last week.

The A. I. Root Co. are arranging to nearly double their present capacity for turning out hives and sections. That shows a good deal of faith in the future of bee-keeping. But it doesn't pay to get discouraged in any worthy cause. When things again take a turn for the better, bee-keepers may have to believe as did the cat on a dark night when he fairly flew ahead of the on-coming bootjacks, brickbats, etc.—he concluded everything was coming his way! Be ready for the "good time coming."

Mr. A. Y. Baldwin, of DeKalb, Ill., dropped into the Bee Journal office while in Chicago July 24. He reports 130 colonies, and but very little honey on account of the drouth.

Among the Bee-Papers

Gleaned by Dr. Miller.

THE NORTH AMERICAN AND THE BEE-KEEPERS' UNION.

Much space is taken up with these topics in the July number of Review. Rev. W. F. Clarke regrets the failure of the North American to be a representative body, and takes a rather gloomy view of its character. He says:

"But the Association has never come up to the ideal formed by its originators, who hoped to make it a Supreme Court or High Parliament of bee-keeping. It has been, for the most part, a mere school for beginners, and there has always been a strongly-marked dislike of thoughtful essays and really able discussions. A good social time and a gossipy talk over the A B C of bee-keeping has been about all the meetings have amounted to. Consequently, many of our foremost bee-keepers have been once and did not care to come again."

James Heddon, although in a different line, takes equally a pessimistic view. Among other things he says:

"Then there is another weak condition with the apicultural organizations we have had. The leaders have not been honey-producers, consequently they were not filled with apicultural enthusiasm. What kind of enthusiasm, then, did bring these men to our conventions, and cause them to seek a leading position at the front? Some desired to be seen. Others had axes to grind. They had some money speculation in view. It has been preachers, professors, publishers, supply-dealers, and a few side-issue bee-keepers, who have been at the front as leaders, because of their energies to get there, and the foolishness of bee-keepers to assist them. Most of these men are impractical, not only as honey-producers, but as workers in any cause. We want practical organizers, instead theoretical ones."

Allen Pringle, in a very clear and sensible article, not only tells what he thinks ought to be done, but tells in detail just how it should be done. He gives bee-keepers credit for honesty and enthusiasm, but thinks there is still enough selfishness left in them to desire a *quid pro quo*. He says:

"It may be taken for granted that a large majority of bee-keepers who would become members and workers in an organization must have substantial inducements held out to them, and be convinced that the thing will pay them in dollars and cents. That fetches them, and that once realized they *stay*, and for a reason which is all-potent with them."

And to be able to meet the case, money must come from outside the organization in the shape of a grant from the State or General Government. Referring to the success of their societies in Canada, he thinks there should be a following in the same line farther south. He says:

"Our county societies are affiliated with our Provincial (the Ontario Bee-Keepers' Association) and would not amount to much of themselves independent of the central society from which they receive an annual money grant and other privileges. Of course the Provincial society receives an annual grant of money from the Provincial government, which is the financial backbone of the society, enabling it to accomplish the splendid work it does; while without that grant the Association could do but little, if it could exist at all. The grant enables the society to hold out to bee-keepers substantial inducements to join and remain members. Each member gets an annual premium of some kind nearly if not quite equal to his membership fee of one dollar. He also gets the annual official report, including the essays in full, and discussions, of the annual meeting."

The important matter of securing the appropriation he thinks can be accomplished in this wise:

"Let the State society get the names of the best and most prominent of these in every constituency, and have them write simultaneously to their respective members during the session when the legislation is being sought. Get as many bee-keepers in every 'riding' as possible to write to their member, urging him to support the bee-keepers' bill. In this way every representative would be reached right from home—from his own constituents; and a general attack of that sort all along the line would have its effect. Even one judicious letter from the constituent would have weight with the member and the more the better to every member. This, as I know by experience, works like magic. Try it; but do not rest with merely advising all and sundry persons through the bee-journals to write their members. If you do, it will *not be done*. Only a few will write. Having their names, they can be prompted and urged personally, by letter or otherwise, at small expense. Supply them with suggestions, forms and postage—i. e., those who need such looking after. It will pay. It is investing one dollar to get back fifty. Of course this pre-supposes that there are a few, more or less, in every State who will push the work, and who are *the* men to do it. That much given, it certainly can be done."

Mr. Pringle strongly emphasizes the securing of a grant by saying:

"On this one matter of getting a regular government grant your success in organization depends more, vastly, than on anything else, because there is, I have no doubt, the apicultural material in every State to make a good and useful society."

Regarding the proposed union he says:

"In union there is strength, and if I may give an opinion in the premises, I may say I quite agree with the editor of the Review that a union of the North American and the Bee-Keepers' Union would be a wise move, and to the advantage of both."

Thos. G. Newman, General Manager of the Bee-Keepers' Union, deplores the act that separated the two organizations, but gives his disapproval of a return to the union in this emphatic fashion:

"Now, in less than a year, up comes the proposition to remarry the two again. The National Association is to marry the Union, as a blushing bride, probably because of her dowery. What child's play and foolishness!"

R. McKnight thinks the social feature of the North American has been its greatest attraction, but this has been re-

stricted by the great distances to be traveled. He is not positive as to how the society can be brought to the highest state of effectiveness, but thinks it might be accomplished thus:

"Amalgamate the North American and the Union; merge the functions of both organizations in one; secure an energetic business man to manage the society's work; have him devote his whole time to build up and extend its influence, and let him be adequately remunerated for his services."

The editor favors the union, enters somewhat into history, and says:

"The Union was organized for a specific purpose, and has done its work well, but a close observer must have noticed that the amount of work that it does lessens as the years go by. At first there was more work than money with which to carry it on, while its manager worked for nothing; now he has a salary (and most richly does he deserve it), yet money is accumulating in the treasury. Some excellent and righteous decisions have been secured, and these have a most quieting effect when shoved under the nose of some would-be persecutor. For this reason the number of expensive lawsuits have decreased. This is a condition that would naturally be expected and is desirable. Now the question arises, would it not be better that some of this money should be *used* for the good of bee-keeping; rather than that it should go on accumulating year after year? (Perhaps a lowering of the fees would be a better plan.) Of course, those who contributed to the making up of this sum are the ones to say what shall be done with it. By the way, Bro. Newman says this sum was raised for the purpose of defense. This is true, but it is also true that it can be used to prosecute adulterators of honey, to secure legislation—in short, for *any* purpose thought advisable by the Advisory Board."

An editorial on this subject in Gleanings for July 15, reads thus:

"Shall the Bee-Keepers' Union be consolidated with the North American? is a question that is now and should be thoroughly discussed preparatory to the next meeting of the latter at Toronto. It is being advocated by the American Bee Journal and the Bee-Keepers' Review. So far as I at present see, Gleanings is also in favor of the scheme. Bro. York thinks it would give us a membership of 500 or 1,000, and a fund from both treasuries of $800; and then, as he pertinently remarks, "we could petition Congress or State legislatures, in such a way that they would hear and—grant." You are quite right, Bro. York. Of course, the consolidation would not affect the workings of the Union.

Canadian Beedom.

Clipping the Wings of Queens.

Although this practice has the support of distinguished names in the ranks of bee-keepers, I have never become a convert to it. If I had no other objection to it, the maiming and disfigurement of the queen would be enough for me. I have a feeling toward a beautiful Italian queen somewhat similar to what I have toward a beautiful woman, and pity a clipped queen as I would a lovely woman whose arm had been amputated. When I visited the Misses Linswik's apiary some years ago, I found that they indulged in the pretty conceit of naming their queens after the fabled goddesses of antiquity, and after the famous historic women of the past. It was swarming-time, and several swarms came off the day I was there. I confess it seemed rather incongruous to see Juno, Venus, Cleopatra, or Joan of Arc tumbling about on the ground and making abortive hops in the vain endeavor to follow their subjects that were flying majestically in the air, while they were grovelling in the dust.

"That's all sentiment," says a very practical bee-keeper, adding probably the question, "What has sentiment to do with bee-keeping?" Not much, I confess, in the case of a great majority of bee-keepers, who would be greatly improved in various ways if they could be cured of this defect. The same barbaric tendency which leads them to care nothing for the looks of a queen, leads them to despise appearance in everything else. They have no eye to tasteful and beautiful surroundings about their homes, their apiaries are slovenly-looking, and their very dress is devoid of neatness and good taste. Who has not observed this latter feature at bee-conventions? More sentiment added to industry, energy and perseverance, would do these regal qualities no harm.

But this reference to sentiment is only introductory, not to an exhaustive discussion of the subject, but to a brief reference to one feature of it, which was impressed on my mind the other day while studying the subject of the queen's wings. I find that it is so arranged in the physical economy of bee-life that the wings receive constantly a large share of nutrition, and that both nerves and large trachea pass into them. All advocates of clipping queens' wings argue that the wings are not organs of vital importance, and that loss of part or even all of them is of no consequence. Prof. Cook goes farther than this, and on the principle that useless organs are sustained at the expense of the organism, pleads that it is a positive advantage to clip queens' wings. Clippers who have no regard to the figure cut by the queen after the operation, content themselves with removing the larger wing on one side, while those who have some eye to looks and would maim esthetically (?) say this interferes so much with the beauty of the queen that it is best to give her a "symmetrical" appearance by cutting off the greater part of both larger wings.

Now, what I want to come at is the probable, if not certain, effect of this deprivation of an important organ in the mother-bee on the workers, after this process of clipping has been continued for several successive generations. Many generations of bees can be had in a very short time, and unfavorable results may be induced within the brief space of one or two seasons. Though the organs of flight are used but seldom in the case of the queen, degeneracy in her wings will be apt to reproduce itself in the wings of the workers, and it is a fair question, of vital pertinence to the best interests of bee-keeping, whether you can diminish the efficiency of bees' wings without impairing their usefulness?

There is another view of the matter: Even though you were to suppose that no injury would be done to the force of worker-bees, the importance of strong wing-power to the queen herself can hardly be overrated. Nature's great law, which provides for the survival of the fittest, operates in connection with the queen's wedding tour. It is a race, in which, as in the case of courtship with human beings, the female makes a feint of trying to get away from the opposite sex. What is mere hypocrisy with womankind, is reality with the queen-bee. She puts forth all her powers of flight, and it is the strongest, best drone who wins the coveted prize. Lessen her wing-power, and is she not likely to fall into the clutches of some poor, feeble drone whose exercise of the paternal function would be a curse rather than a blessing to the hive? It reminds one of a story concerning Mrs. Anna Dickinson, who, being on a lecture-tour, spoke one evening in a certain place pretty plainly on heredity. Next morning, in the cars, a small burlesque of a man, in a somewhat loud voice, asked if she were not the lady who had lectured the previous evening? On being told she was: "Well, madam," said the little fellow, "I am the proud and happy father of eleven children." Speaking up so that all in the car could hear, Mrs. Dickinson exclaimed: "Just think of such a little, scrumtified speck of humanity as that duplicating himself eleven times!" An inferior drone duplicates himself many thousands of times.

That New Song—"Queenie Jeanette"—which is being sung everywhere, we can send you for 40 cents, postpaid, or club it with the American Bee Journal for one year—both for only $1.10. Or, send us one new subscriber for a year (with $1.00), and we will mail you a copy of the song free.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Not Quite All.—"All are starving for better bee-literature."—J. W. TEFFT.

I fear Friend Tefft, like some others, is drawing a little upon his imagination. Apiculture has about as good literature as any industry of the same importance. Then, if there is such a great demand for a better literature, why do not some of the people who know so well the defects of our literature go to work and improve it? The door is wide open, and there is every chance for anyone who thinks he can fill the vacuum to walk in and occupy the building. It is a very easy thing to stand on the outside and say what should be done, but it another thing *to do it*. Every man who has published a paper knows that it is frequently the man who is in arrears for a year or two who does the most kicking. There is nothing personal in this remark; I only state a general principle.

How to Know the Wild Flowers.—Whatever renders Nature more attractive, whatever adds to our store of knowledge of the things with which we daily come in contact, has not been created in vain, and should command our attention. I am led into this train of thought by reading a very interesting and useful book, by Mrs William Starr Dana, entitled, "How to Know the Wild Flowers," published by Chas. Scribner's Sons, New York.

This is not a mere text-book on botany, but an attractive and helpful talk about hundreds of our wild flowers; yet it is so arranged and the matter so classified that, with the book in hand, a thoughtful, studious person will be able to properly name and classify most of the common flowers of field and wood with which he may come in contact. It is filled with illustrations which materially help the reader to understand the descriptive matter. [A sample of them appears on the first page.—EDITOR.]

The text has woven into it many apt quotations and dainty bits of poetry about the flower in question, which relieve one of the feeling that he is reading the dry facts of a text-book. There is a great deal of information about many flowers, which cannot be found in ordinary text-books on botany, and could be obtained from other sources only by a wide course of reading.

A walk in the meadow or forest, with the book for a companion, cannot fail to furnish recreation, as well as information which will be found valuable in the after walks of life.

Comb-Building by Drones, Is It?—Do the drones build all the comb? The "new edition" of the A B C of Bee-Culture is just out. On page 352 we read: "In 1880 we offered Friend Doolittle $100 for a careful going-over of the 'A B C' book, that he might point out its faults, and add such suggestions as his large experience might dictate.....In the present edition (1891) we employed him to go all over it *again* and bring his suggestions up to present date." On page 360 we read: "Recognizing the value of the comments of Mr. Doolittle in previous editions of this work, I have thought best to solicit the aid, in a similar way, of a no less practical and prominent bee-keeper, Dr. C. C. Miller, of Marengo, Ill. Accordingly, in 1888 he reviewed most carefully this entire work, and I here append the comments which he has made."

In the preface to this edition we read: "The present edition, as well as the previous editions, is not only enlarged, and illustrated with many new and beautiful engravings, but it has received a careful and most thorough revision."

Now, bearing the above in mind, let us quote some from the text. On page 176, article "Honey-Comb," after having shown up some of the errors of Agassiz and Tyndal, and having explained how the wax-scales are secreted, the writer says:

"If a bee is obliged to carry one of these wax-scales but a short distance, *he* takes it in *his* mandibles, and looks as business-like thus as a carpenter with a board on his shoulder. If *he* has to carry it from the bottom of the honey-box, *he* takes it in a way that I cannot explain any better than to say *he* slips it under *his* chin. When thus equipped, you would never know *he* was encumbered with anything, unless it chanced to slip out, when *he* will very dextrously tuck it back with one of *his* fore feet. The little plate of wax is so warm from being kept under *his* chin, as to be quite soft when *he* gets back; and as *he* takes it out and gives it a pinch against the comb where the building is going on, one would think *he* might stop awhile, and put it into place; but not *he*; for off *he* scampers and twists around so many different ways, you might think *he* was not one of the *working* kind at all. Another follows after *him* sooner or later, and gives the wax a pinch, or a little scraping and burnishing with *his* polished mandibles, then another, and so on, and the sum total of all these manœuvers is, that the comb seems almost to grow out of nothing; yet no bee ever makes a cell *himself*, and no comb-building is ever done by any bee while standing in a cell; neither do the bees ever stand in rows and 'excavate,' or anything of the kind."

The italics in the quotation are mine, as I want the reader to get the full force of the statements. Just think of it! Written by my friend, A. I., read twice by Doolittle for errors, and once by Dr. Miller, and then reviewed by our wide-awake and energetic friend, Ernest, and yet the *he's* are building comb! This *is* funny! Can we now blame the editor of the Cosmopolitan for putting a few *he's* in his head-lines and notes?

Say, Bro. Root, send me a check for $100, and I will go through the "A B C" and clothe the bees in their proper gender, and I may put different clothes on some other things before I get through. By the way, this "new edition" of the "A B C" is a valuable book, and every bee-keeper should have a copy. I will have more to say about it in the future.

[The publishers of the Bee Journal have the above book for sale, postpaid, for $1.25; or clubbed with the Bee Journal one year—both together for $2.00. Better order a copy, if you haven't it already.—EDITOR.]

Hardly.—"We need an apicultural station under the national government, and Frank Benton would be a good man to conduct it."—Editorial note in Gleanings.

I cannot agree with you, Friend Root. I hardly think it would be best to put a man in such a position who takes a year to get out a report of a bee-convention. The best thing Mr. Benton can do is to retire from public life. A man who has so many personal grievances against his fellow bee-keepers should disconnect himself entirely from them, and take up some business where he can go it *alone*. Or at least this is my idea.

Honey as Food and Medicine.—A new and revised edition of this 32-page pamphlet is now issued. It has 5 blank pages on which to write or paste recipes taken from other sources. It is just what its name indicates, and should be liberally distributed among the people everywhere to create a demand for honey. It contains a number of recipes on the use of honey as food and as medicine, besides much other interesting and valuable information. Prices, postpaid, are: Single copy, 5 cts.; 10 copies 35 cts.; 50 for $1.50; 100 for $2.50. Better give them a trial. Send all orders to the Bee Journal office.

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

Biggest Premium We Ever Offered!

THE BEE-KEEPER'S GUIDE:

—OR—

MANUAL OF THE APIARY.

—BY—

PROF. A. J. COOK.

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General Items.

Ozark Mtn. Region—Hive-Covers.

Shortly after May 31 started for Arkansas—my former home—and while there I visited the apiary of F. M. Tiner, of Ingram, and found him to be a progressive bee-keeper, with his bees all in fairly good condition. Bees did but little here in the mountains on account of dry weather, until June 15, when we had good rains. That started everything to growing and blooming nicely, and bees are doing better now.

I notice on page 335, Wm. M. Barnum asks, "What improvement can the readers of the American Bee Journal suggest, that will make our hive-covers water proof, lasting and non-crackable?" I can tell how I fix my hive-covers. I just saturate them with oil just before nailing them together, and after nailing I paint the top. I never have had one to leak or crack that was treated in this way. J. R. GIBSON.

Redford, Mo.

May His Like Increase.

It is now nearing the close of my first year's subscription to the American Bee Journal, for which I will say there is not a finer or better bee-paper printed, and I cannot think of doing without it.

C. L. YARBROUGH.

Fair Grove, Mo., July 1.

Hive-Covers—Potato Blossoms.

I have read in the various bee-papers about leaky hive-covers. I am using some covers that I made over 20 years ago, for my old grandmother one time when I was home. They are made gabling, out of ⅝ boards, edges planed so they fit close together. I cover them the same way as we make what is called aboard a ship, "mast cloths." Take what painters call "grease paint," that is, all old paints that they turn together—all kinds of old paint that has stood for quite awhile. Put a thick coat on the boards, then right away down on over it heavy unbleached sheeting; tack it all around, after drawing it tight, then paint it over and let it dry hard. Give it two coats, and when it becomes dry it will not leak, crack or warp. Those I have, have been painted about every two years, and I am fixing all of my covers, as it is cheaper than tin.

Is there any honey for the bees in potato blossoms? I have about 10 acres of potatoes and one field; the bees seem to be pretty thick on the blossoms, and the others they do not seem to visit at all.

Charlton, Mass. GEO. L. VINAL.

Swarming—Further Remarks.

Concerning my remarks on the prevention of swarming on page 874, Dr. Miller wants some figures.

My practical experience began four years ago, when I purchased 4 colonies, a standard book on bee-culture, and other essentials. For the last three years each I have had 4, 7, and 11 colonies, respectively, and all but 2 in dovetail 8-frame chaff hives. During those three seasons I had not a single natural swarm, increasing only by building up from nuclei. My experience for that time prompted me to write as I did; but this season, with a spring count of 29, having purchased 12 additional colonies, I have had, up to this date (July 1), 9 swarms.

Now, why should I get so many swarms this season, and scarcely any surplus, when last season I got a fair surplus and no swarms? The only reason that I can assign is, that I allowed myself to be partially convinced by the writings of others, that I had been tinkering with my bees too much, and consequently did not give them the requisite attention at the proper time. Will some one who knows, tell me *why* some

bees store surplus in abundance, while others, under exactly the same conditions, think chiefly of swarming? If the difference is not in the surrounding conditions, then it *must be* in the strain of bees. And this brings me to the substance of my former article, viz.: That with a proper strain of bees, and timely attention concerning their requirements for additional room, swarming can be reduced to a minimum. But it is necessary that we breed from non-swarming colonies, taking into consideration their other essential qualities in order to produce that strain.

And here I find that Dr. Miller in the Query given on page 419, fully agrees with me, that it is possible in time to produce a strain of bees that is not given to swarming at all, although he says that one gradually learns not to expect too much from the title, "How to Prevent Swarming." JOHN WELCH, JR.

Frost, Ohio, July 1.

Prospects in Northeastern Ohio.

I have been much interested in reading the reports under the heading of "General Items," in the Bee Journal, but I have not seen any reports from this part of the land. The past winter was a very severe one for the bees, as it was so cold, and the cold weather continued so late in the spring. I started in the winter with 21 colonies, and lost 7 during the winter and spring. We have a very poor prospect for a good honey crop this season, although there is a great deal of Alsike clover around here. The weather was very dry until a week ago, and since then we have had several good rains. While it was so dry the bees flew but very little during the middle part of the day. I think the weather was too hot and dry for the clover blossoms to secrete honey, but since the rains the bees are working much better.

There will not be any basswood blossoms for the bees to gather honey from this year, as the severe frosts during the middle of May froze the buds. The trees were budded full, but the frosts were too much for them. I would like to hear from other beemen whether the blossoms froze in other sections or not.

The severe drouth of last summer, and during a part of the summer before, has been very hard on the white clover, and has thinned it out a good deal. Two years ago at this time, I had taken 30 pounds of honey from one colony, and 25 pounds from another; but nary a pound can I get at this time this year. There is not much interest taken in bee-keeping in this section of the country, as we very seldom have a very large crop of honey. Last year was a very poor season also, on account of the dry weather.

Bees have swarmed but very little so far. I have not had any swarms at all yet, and have heard of but very few from others. I think bee-keepers ought to sow more Alsike clover, and encourage others to sow it. Sow sweet clover along the roadsides, and in other places where it would grow.

Oakfield, O., June 26. J. S. BARB.

A Not Encouraging Prophecy.

It is nearly a half century ago that I settled my first swarm of bees, and since that I have learned something by the use of experience and bees, and actual cartloads of bee-books and bee-papers; yet, for all that, I have never figured to place myself in public attention as an apiarian savant. And in speaking of this season I may appear to some like Josh Billings' old hen, that prophesied after she had laid her egg, if I tell what I remarked early last spring about the prospects for the bees this season.

I have a good locality, and a good location, both, and to me there is a wide difference in the meanings of those two words. My bees never seemed to do better in opening out and booming for honey and brood-rearing, than they did during the bloom of spring; but that did not fool me, so I told various persons that I felt sure, from what

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Honey & Beeswax Market Quotations.

CHICAGO, ILL., June 7.—We have our usual dull season which we look forward to and expect. Honey is entirely forgotten during the months of June, July and August. The market is pretty well cleaned up of all grades of honey, so the prospects are encouraging for the coming season. We are getting 13@14c. for light comb. J. A. L.

CHICAGO, ILL., May 23.—The trade in comb honey is very light at this time of the year—as it is between seasons. Soon we will get the new crop, and it will come on a bare market. Just now what little comb sells brings 14c. for the best grades. Extracted, 5½@7c. All good grades of beeswax, 30c.
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CINCINNATI, O., July 8.—There is a good demand for extracted honey at 4@7c., with a small supply on the market. Demand is fair for choice white comb honey at 12@14c.

Beeswax is in good demand at 25@30c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, Mo., July 20.—Old stock of honey well cleaned up. Some new comb on the market. We quote: New comb, No. 1 white, 1-lbs., 14@15c.; No. 2, 12@13c.; No. 1 amber, 12@13c.; No. 2, 10@11c. Extracted, white, 6@6½c.; amber, 5@6c.
Beeswax, 22c. C. C. C. & Co.

PHILADELPHIA, PA., June 18.—The new crop of comb honey is arriving slowly, and is in fair demand. No new extracted honey has arrived in this market as yet. We quote: Comb honey, 9@13c. Extracted, 4½@6c.

Beeswax is still declining. The adulteration of beeswax has demoralized our market this spring, and has hurt our sales considerable. Price, 25@27c. W. A. S.

NEW YORK, N. Y., July 6.—The market is about bare of comb honey and there is no demand at the present. The market is quiet on extracted. Demand is limited, with plenty of supply arriving to meet the demands and more. We quote: California, 6@6½c.; Southern, choice, 60@65c. per gallon; common, 50@55c. per gallon. Beeswax is declining and selling at from 29@30c. at present, but the indications are that the price will decline still further. H. B. & S.

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I. J. STRINGHAM, 105 Park Place.

Kansas City, Mo.
C. C. CLEMOMS & Co., 423 Walnut St.

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I knew, that this would be a very poor season for bees, and we would hear of colonies starving to death in the month of August, and that there would be a heavy loss of bees next winter, followed by a corresponding spring dwindling next spring.

If the present indications continue, the case will be "even so, and more also," before we get to where I drove my stake. Early in June all of my queens stopped laying (almost entirely), and I have not had a swarm this season. A divided colony, full of hatching brood, and some young larvæ, even refused to build a queen-cell. By the last of June my colonies were all depleting, and I had to feed some to save their lives, that hadn't a single cell of sealed honey in their hives. I will see them through, however, and stock them with young bees for winter, so I don't expect to lose any. REV. A. R. SEAMAN.

Connellsville, Pa., July 4.

Linden or Basswood Bloom.

On page 368 is an item which I wish to criticise, as to the time it takes for a linden or basswood tree to come into flower. Mr. E. R. Root says perhaps 20 years, that is, to yield honey. Now I am sure he has had practical experience, as he saw the plantation he speaks of grow up, but that is only in his district. Now I am sure he will not object if I tell him what the linden will do in the "wild and woolly West." In the winter of 1887 there were cut down several linden trees to open up a country road, but the road failed to be completed, and the result was that it run into brush (as we say), and the stumps of the linden are surrounded by a growth of 7 or 8 feet high, and this growth is well covered with flower-buds at the present time. But that is rather unusual in so short a time. I attribute it to last year's drouth.

Then, again, I have under my charge some trees that were planted in 1889, which are now 3½ inches in circumference 2 feet above the ground; to-day they stand loaded with flower-buds, and will, from all appearance, yield nectar, I think; but I know here in Nebraska we have a rather dry subsoil, which causes, in most trees, a stubby and firm growth, and such always induce fruitfulness. So if any bee-keeper feels age advancing, and thinks he will never see any returns for his labor, I say take heart, and if you succeed in planting but a single tree, as it grows, and years roll by, I will venture the assertion that you will get a good deal of pleasure in seeing that tree develop itself. W. H. MORSE.

Florence, Nebr., June 16.

The Kingbee Wasn't In It.

A few weeks ago one of my bee-keeping friends received word that he was wanted at one of the neighbors to hive a swarm of bees, and, as they were not in the business, to bring a hive along with him. So, "armed and equipped as the law directs," he obeyed the summons.

On reaching the place, he found "a state of things." The lady of the house had purchased a bushel of strawberries, and spread them on a table in the yard to dry. The bees in the neighborhood had "caught on" (in spite of Dr. Miller), and my friend "caught on," too, but did not "let on." Nevertheless, the bees were getting away with the berries amazingly lively.

About this time a gentleman stepped up—(I need not tell you that he was an old-timer)—and took a look at the bees; and then, with an air of one who knows all about it, said: "The kingbee ain't there!"

At this point my friend told those who had sent for him, that he could not hive the bees unless they clustered, and when they did this, to let him know, and he would come. But he hasn't been sent for the second time. SUBSCRIBER.

New Jersey.

Bee-Keeper's Guide—see page 496.

Convention Notices.

CALIFORNIA.—The next meeting of the Tulare County Bee-Keepers' Association will be held in Visalia, Aug. 14, 1895. All interested are invited. J. E. YOUNG, Sec.

Visalia, Calif.

TEXAS.—The Texas State Bee-Keepers' Association will meet at Greenville, Tex., Aug. 21 and 22, 1895. Good premiums are offered for best exhibits. All are invited to attend.

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ILLINOIS. — The annual meeting of the Northern Illinois Bee-Keepers' Association will be held at the residence of O. Taylor, in Harlem, Ill., on Tuesday, Aug. 20, 1895. All are cordially invited. B. KENNEDY, Sec.

New Milford, Ill.

TENNESSEE.—The next annual meeting of the East Tennessee Bee-Keepers' Association will be held at Mulberry Gap, Tenn., on August 16, 1895. The members are urged to attend and all bee-keepers are invited to be present. H. F COLEMAN, Sec.

Sneedville, Tenn.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association in Fort Scott, Kans., on Sept. 19, 1895. All are cordially invited to come and have a good time. There will be a full program.

Bronson, Kans. J. C. BALCH, Sec.

WISCONSIN.—The Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting at Platteville, Wis., Oct. 8 and 9, 1895. "Come, every one." Don't get discouraged if we haven't got a crop of honey. We will have a good time at Platteville, just the same. Bring your wives and daughters with you. Many interesting subjects will be discussed. M. M. RICE, Sec.

Boscobel, Wis.

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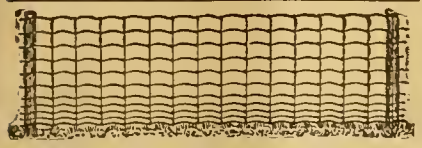

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Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Wintering Bees on 8 Frames of Honey.

Query 982.—1. Will a colony winter well on 8 frames if the 8 frames are filled with honey with no empty cells?

2. If empty cells are desirable, what proportion of the 8 combs should be empty, and where should the empty cells be located?—Vt.

Prof. A. J. Cook—1. Yes. 2. The center cells are the empty ones, in general.

Rev. E. T. Abbott—2. I prefer some empty cells in the center frames, at the bottom.

H. D. Cutting—1. I don't know. 2. With present knowledge, I prefer about ⅛ of each.

B. Taylor—1. I do not know. I never tried it. 2. One-third, in the center of the brood-nest.

Chas. Dadant & Son—1 and 2. No, the combs should be at least half empty, at the lower part.

W. R. Graham—1. I think not. 2. About the amount of one frame, and that in the center.

Mrs. L. Harrison—1. I think they would, and consume honey fast enough, to have empty cells.

Dr. J. P. H. Brown—1. In my latitude they would. 2. The empty cells should be near the bottom of the combs.

R. L. Taylor—1. I would not like to risk it out-doors in this latitude (Michigan). 2. From ⅛ to ⅛. The lower front center.

C. H. Dibbern—1. I prefer empty comb equal to about two frames. 2. Empty cells should be located near the center of the hive.

P. H. Elwood—1 and 2. Yes, if the frames are filled early in the fall, the bees will empty enough cells before severe weather comes.

Rev. M. Mahin—1. No! 2. That will depend upon the size of the colony. There should be enough empty comb for the bees to cluster in.

G. M. Doolittle—1. I prefer some empty cells at the center of the bottom of combs. 2. To the amount of one frame in the center at the bottom.

Wm. M. Barnum—1. Yes. 2. The empty cell is generally present to a greater or less extent, but I have never considered it particularly desirable.

W. G. Larrabee—1 and 2.—I never tried to winter a colony on 8 frames of solid honey, but I should prefer to have about ¼ of the cells empty, and those in or near the cluster.

Dr. C. C. Miller—1. I don't know, but think they would do pretty well. 2. I don't believe I'd care for more than the amount of one comb, and I'd want that at the lower part of three central combs.

Allen Pringle—1. That depends. If they have a 2-inch rim under the hive and a smaller space above the frames, and are in a repository of 40° to 45°, they will be all right so far as wintering is concerned; but if these conditions are not present, they will probably be all wrong. I do not believe in having the whole of the frames perfectly full, for more than one reason. 2. The empty cells should be in the center towards the bottom, and be about ⅛ of the whole space.

E. France—1 and 2. Not out-of-doors. I winter bees out-of-doors on 8 full Langstroth combs, with 8 more below the honey, part full or empty. The feed should be on top; the empty combs below the honey.

J. E. Pond—1. Yes, they have so done with myself. 2. I don't know that any empty cells are desirable, but they should be on the out sides of the brood-chamber, if used at all, and a free passage over the tops of the frames should be given.

Eugene Secor—1. I don't understand the purport of this question. An unnatural condition is described. There are always empty cells in a normal colony in the fall. And bees *do* winter well in just such a hive. 2. I never pay any attention to such matters.

Jas. A. Stone—1. Yes, they will soon empty some of the cells. The condition spoken of is almost impossible, unless by feeding, as the honey-flow does not often end with a severe cold snap, and then the bees empty cells enough—if that is desirable. 2. I do not know. I want to see what the others say.

G. W. Demaree—1 and 2. A hive solid full of sealed honey right at the time hard winter sets in, would be a dangerous condition of things for the bees. Naturally, such a state of affairs would never occur in my apiary, as the last "hatch" of brood is sure to have more or less open cells in the center combs.

Mrs. J. N. Heater—1. Yes, sir. 2. No empty cells will be needed until spring. If you have an early honey-flow, as from basswood or clover, provide the queen with room by inserting at least two empty combs in the center of the brood-chamber. But if you have to depend upon a fall flow, leave all the honey in the hive.

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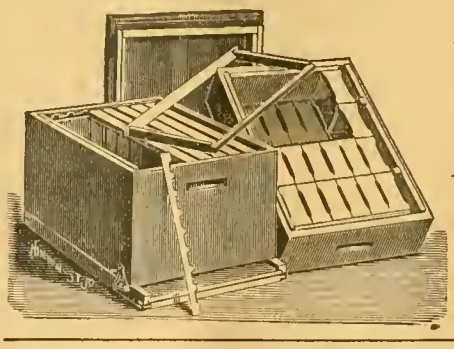

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35th Year. CHICAGO, ILL., AUG. 8, 1895. No. 32.

Contributed Articles.

On Important Apiarian Subjects.

The Large and Small Hive Question Again.

BY F. L. THOMPSON.

In reply to Mr. Davenport's remarks on page 391, I should not have put in the word "further" in my phrase, "which were further embarrassed." It did not occur to me until too late to correct it, that the most obvious meaning of that expression was as Mr. Davenport understood it. Omitting it, my meaning would have been (and was, intentionally) that these as yet undeveloped colonies in large hives, while developing to a proportionate size with their hives, would produce an excess of brood and bees over the quantity required by the locality, supposing that it was already fully stocked, as I inferred it to be from Mr. Davenport's words. Then if these large hives were sufficiently numerous, that excess of bees and brood might decrease the surplus "per colony" to such an extent that it would all go into the brood-chamber in these *developing* (but as yet undeveloped) colonies; while the colonies in small hives, having no room for it below, would store it above. I beg Mr. Davenport's pardon for causing him to consume his time in refuting what would have been indefeusible. I appreciate his illustration.

But I fear he has done the same thing, or else I am not able to tell which is the most obvious meaning and which is not, of his words on page 231. He there says, "they would not have secured any more per colony, or as much, if they were larger, for there were enough in this yard to gather all, and more than there was to be had from it." My impression is, that in the phrase "if they were larger," the word "they" would have to be limited more if it is to convey the idea "if they were larger and fewer" And a little before he had said, "Suppose *these colonies* had been in big hives" (the italics are mine).

But whether the above is obscure or not, we now have his assertiou—"I have not argued any such thing," so that point is clear.

But there is another point, in Mr. Davenport's article on page 376, that I do not understand. After speaking of his own unsatisfactory experience with large hives, he says, "But I winter my bees in the cellar altogether. In out-door wintering it may be quite different," after having said in the same article, "I do not think the locality makes much difference to the specialist about the right size of hive." But I always understood that the locality makes a good deal of difference in the methods of wintering. "Quite different" and "not much difference" do not ordinarily mean the same thing. As Messrs. Heddon and Aspinwall, in Michigan, and Mr. Pond, in Massachusetts, have had good success in out-door wintering, there are quite a number of Northern bee-keepers left, without going down South, whose success with large hives "may be quite different" from Mr. Davenport's in the matter of carrying over most of the bees of a large colony from fall to spring.

So much for Mr. Davenport's use of language, which he will no doubt be able to satisfactorily explain, if he thinks it worth while.

Now while he is on the stand, as it were, I wish he would

Mr. Chas. E. Parks—See page 504.

theorize a little, if he can bring himself to it. Has he any idea why, in cellar-wintering, the simple fact of there being more bees in a hive causes some of them to die off prematurely, whereas a smaller number all pull through?

Again, he says: "My experience has been that, as a general thing, eight frames are enough for the best queens we can get at the present time." Here is another queer fact, which I will not ask him to theorize about, for I don't believe anybody could, without being well versed in biology. It amounts to saying that prolificness beyond an 8-frame capacity, as a general thing, is attended with inferior qualities in the offspring. Mr. Davenport may be considered as the discoverer of a new fact in apiculture, if this is true. This is

too important to let pass without confirmation from as many other bee-keepers as possible. It is not the same thing as saying that prolificness alone is not to be regarded as the chief excellence in a queen, which all can understand and admit. I had one very prolific queen, but the colony was one of the most sluggish I ever saw. She was a daughter of a 5-banded queen. I have had other colonies with prolific queens that were not, and I should never have supposed from my own experience that prolificness generally implied detrimental qualities. But it may be so.

But supposing it is so, how does that affect the hive discussion? It is only saying that queens having a tendency to produce an abnormal amount of brood are, for some reason unknown to us, undesirable, although such brood may be produced in the right season. It is not saying that the majority of queens, producing a normal amount of brood in proportion to the size of the colony, will not be desirable when said colonies are *large*. This, Mr. Davenport admits "may" be the case when out-door wintering is practiced. (It should be noted, in the instance in my experience given on page 368, that the amount of brood, while large, was *not* abnormal in proportion to the size of the colony.)

Mr. Davenport also says: "I believe that, after a colony gets to a certain strength—a strength with the right kind of queen—the 8-frame hive gives ample room to develop, and they will store as much or more for the same number of workers as one much larger." Mr. Davenport here gets down to bed-rock. All the superiority of the 8-frame hive must ultimately rest on this belief. That he himself "believes" so, is no inconsiderable point in its favor; for as the editor of Gleanings says: "Mr. Davenport is a very large and extensive bee-keeper, and his statements can be taken as in some degree authoritative." But—should not this be something more than a "belief" if it is ever going to be anything more than a mystery? Should it not be demonstrated, if possible? And what are we to make of the "beliefs" of other large and extensive bee-keepers, who prefer the larger hive? Decidedly a little rigid theory would not come in amiss here. Nothing like reason to support "belief."

I would be glad to have Mr. Davenport point out, if he will, any specific objections to those theories which he characterizes in general as "too deep and complicated." I will fight for the principle of sandwiching theory in with practice, for I do not see how the greatest success can be achieved in any other way; but still I am not so conceited as to suppose that it is impossible for any particular theories to be defective.

A great mass of undigested material on the capacity question has accumulated during the past year. A little theorizing—that is, deduction of principles—is necessary in order to get any good out of it. To simply keep adding more experience, first on one side, then on the other, leads to no conclusions. My main source of income is bees, and I want to know where I am "at" before accepting even facts without scrutiny, which may be misleading.

The preference for the 8-frame hive by many leading bee-keepers is a fact that needs accounting for. I accounted for it by supposing that, if the rule is held to that some surplus must be had every year from every swarm and every colony, the limited capacity necessary for swarms and one-year colonies led to the use of a small chamber for all; and I might have added that another circumstance contributing to the belief that nearly all colonies in an ordinary apiary are profitable in small chambers only, was the continual undermining of the strength of the old colonies by swarming. But do away with swarming, and the case is different—all "grown-up" colonies, which, by means of their *sustained* strength furnish the queens every inducement to employ their egg-laying capacity (whatever that is) at *all* times, as well as at the close of the season, if given room to do so, and if there is no hitch in the wintering to lose advantages already gained. Is it not a very reasonable supposition, that if eight frames are considered just right when swarming is rife, with its parceling out of energy, that it will take more than eight to preserve the equilibrium between colonies and hives when it does not occur?

The preference for the small chamber is readily enough accounted for by supposing that eight frames are enough for the average queen. But that is rendered doubtful in localities where a larger capacity than the 8-frame averages the same proportion of bees at a time when there will be something for them to do—and such localities seem to be rather abundant, judging from the reports in Gleanings. Either we have still not got the right theory, or else the 8-frame hive is not the best in all localities. The 8-frame is more common here, as everywhere where the supply-dealer and his standard goods holds sway, but is not preferred by the big bee-men, who are as free from theory and as full of practice as Mr. Davenport could wish.

In short, what Bee-Master calls the "convincing plea" of Mr. Davenport, rests on some mysterious facts and beliefs, which, coming from such an authority, might well be convincing, were there not already so many discordant facts and opinions among high authorities; and it seems as if the discussion would never end, unless principles, as well as facts, can be substantiated.

Arvada, Colo.

A Question—Bee-Escape Experience, Etc.

BY G. W. DEMAREE.

How long would a man have to study the business operations of the simple (?) rural pursuit we call bee-culture, to so hedge himself about that his judgment is never over-reached—in fewer words, so that he never makes any mistakes? Who can answer this question? I cannot.

AN EXPERIENCE WITH THE BEE-ESCAPE.

For five or six years I have used the Reese bee-escape. (Perhaps it ought to be called after my name, as I introduced the name "bee-escape," when exhibiting a device of the kind at the International Bee-Keepers' Convention held at Lexington, Ky., in 1881. But I care very little about it. Mr. John S. Reese, of Winchester, Ky., made the first practical application of the idea—the automatic shifting of bees from one department of the hive to the other.) I have used the original *cone* escape introduced by Mr. Reese, and have used my own little trap-door escape, and also the nicely adjusted little spring escape introduced by Mr. Porter, and in these years I have never met with an accident of any kind to the bees, until this summer.

During the very warm weather in June I discovered that one of my strongest colonies that had a set of Langstroth combs above the brood-nest, was becoming crowded for room, and being in a hurry about something, I lifted off the heavy super, and seeing the combs were ready for the extractor, I adjusted a case of empty combs in the place of the super removed, and on top of this was placed the bee-escape board, and the full case was *tiered* on the board in the usual way, and I went about my business, leaving the bees to pass down through the Porter escape at their leisure. I have done the same thing hundreds of times.

Some hours afterward, I passed by the hive and chanced to lift the cover of the hive to see if the bees were moving down through the escape. It was a sight to see the plight of the crowded bees in the super. They were well nigh suffocated—black and dripping with moisture. They seemed to be asphyxiated, when the cover was first removed, but after a little airing they began to boil up over the edges of the super, dripping wet. The only thing I could do for them was to brush them gently from the combs in front of the hive, and leave them to the chances of recovery. This has taught me a

lesson that I shall not soon forget. When using a bee-escape of any kind, the bees should have ventilation at the top of the case or super.

I learned several years ago that when using the Alley drone and queen trap, ventilation at the top of the hive was positively necessary to guard against the danger of suffocation. But I do not use any queen-trap now, as clipped wings is the best "trap" for me.

THE SEASON OF 1895 IN KENTUCKY.

After the drouth of last year, well-informed bee-keepers expected a light honey-yield in Kentucky this season. The white clover crop is an entire failure, but what bee-forage we have has yielded nectar liberally, and we have taken some honey of fair quality. I say "some honey," for in fact the crop of honey will not be 33 per cent. of an average yield.

It is decidedly seasonable here now, and has been since the first of June, and there is a good outlook for fall flowers. There may be better times for the bee-business after this year. The questions so terribly tattered and worn about the size of hives, and depth of frames, and "sitch," have little fascination to many of us who yearn for the return of the good honey seasons of the past.

Notwithstanding a constant income of nectar this season —plenty for breeding purposes—our queens have not filled their combs chock-full of brood as they usually do under like circumstances. I cannot account for this without believing that the long, hard winter and bad stores injured the queens, and made them less prolific.

KEEPING EMPTY COMBS WHEN NOT IN USE.

Let me name a problem here, for those persons who know a great deal about impracticable things, and especially for the practical bee-keepers: Give us the best, cheapest, cleanly way to preserve empty combs when not in use. I have succeeded in keeping worms out of a lot of combs this season, by spraying them with (stove) gasoline. This kills immediately every worm it touches, and when it evaporates it leaves no odor behind. I have saved another lot of combs by simply filling the cells with fine, dry salt.

Combs that bees perish upon, in the early or late spring, need immediate attention to keep the worms from destroying them early in the season. Those that have been exposed to the cold all winter need no attention until the hot season sets in. Such combs I have saved an indefinite length of time by storing them in cotton bags, and tying them up tightly. We want light on this subject.

Christiansburg, Ky., July 19.

[If I mistake not, Dr. Gallup has a method of taking care of empty combs, which he is invited to describe. Others, of course, are requested to give their ways of doing it.—EDITOR.]

What Dr. Miller Thinks.

PHACELIA.—On page 470, phacelia gets quite a "send off." I believe you may set it down as a fixed rule, that when a plant has no other value than as a honey-plant, it isn't worth while to talk much about it unless it be for waste land. Phacelia is quite a pretty flower, and as such has been cultivated at least 50 years, but I doubt if any one in this country will ever have a chance to tell what its honey is like. I very much doubt if any one in Germany has ever got enough from it to be able to furnish a sample of pure phacelia honey.

STINGING OF BEES.—"Are *you* sure, Bro. Abbott? I think I'd stand by that statement of the British Bee Journal (page 473), that a bee never volunteers an attack, save in the immediate neighborhood of its hive, but I think I'd leave off the clause, "and even then never without some reason." For the average apiary generally has some bees in it that will sting with no other reason than that you've come pretty close to the hives. It might be well also to carry around with the statement an explanation that the neighborhood of a cross colony is sometimes quite extended. But unless you pinch a bee, I don't believe it ever stings unless it thinks it's defending its hive.

INTRODUCING QUEENS.—On reading that item on page 470, I felt like starting for a certain printing-office with a big stick. I was restrained by the fact that the mistake might have been all my own, after all. In the item about introducing queens, in the sentence next the last, please add so as to make it read, "The caged queens were taken care of all right, but the free queen of the colony was killed." On further thought, I'm pretty sure the mistake was made at this end of the line. [It was my fault, Doctor. Your "end of the line" is all right.—EDITOR.]

ONTARIO ASSOCIATION.—That membership of 176, as given on page 476, is pretty good proof that a good membership can be obtained by the right plans, and we better change our plans on this side the line.

WHY BEES SWARM.—I have received the following from Mr. F. C. Morrow, of Wallaceburg, Ark.:

DR. MILLER:—On page 359, you ask why bees swarm. Well, I know, but you don't know that I know, and I don't know that you will believe me when I tell you.

To begin, bees desire a plurality of queens, but the queens seem to say: "I, thy queen, am a jealous queen." I guess you have the idea well settled in your mind that bees want *only one* queen, but you must change, for I can safely introduce two or more queens at the same time to one colony, by using excluders, so you see the bees do not object, but the queens are full of *next* jealousy.

Another thing you must know: The bees love *their* queen above all things else—yes, after they have toiled all their life and laid up much stores, they are willing to leave it all and take the old queen and start anew.

Doctor, there is another thing I wish you to know: Bees know nothing about laying up stores for winter—all there is about it, they are *very greedy*.

Queen-cells are the cause of swarming, but what causes queen-cells? Well, let us reason (but don't forget greediness and plurality). A bee comes in panting with a heavy load of honey, and every sister wants to know where it came from; the loaded bees says, "Down on the creek there is a million times more basswood honey than we can all gather. What will we do about it? We will feed mother high, and get her to lay millions of eggs. Yes, but she can't possibly lay nearly enough eggs. Well, we will go to work and rear more queens. Mother will object, but there are plenty of us, and we can manage that." So the work goes on for about eight days.

As long as there is but one center for love, we have union; but now what? The old queen has left off egg-laying, and is using every effort to destroy the young queens. (Some wise men say she is only getting herself light, so she can fly easily.) So we see discord take the place of union—"a house divided against itself cannot stand." A council is held, and the decision is that those that love the old queen must take her and leave, as the cells cannot be removed.

Doctor, if bees rear queens only for the purpose of swarming, the old queen would stay in the old hive, and a swarm would issue for each and every young queen reared; and there would be a week or so between the ages of the young queens. Bees do not rear queens for the purpose of swarming, but swarm to save the queens.

Scarcity of forage will destroy the desire for a plurality of queens. F. C. MORROW.

I don't know, Friend Morrow, I don't know. Some things look your way, and then again there are things that look the other way. Bees may be very anxious for queens, sometimes, but it hardly looks like it when you take away their queen and put in another and they promptly ball her to death.

I think you're right that bees don't store honey for the sake of having a supply the following winter—they just store it for the fun of the thing.

So the flood of honey makes the bees want more queens so as to rear more bees? But if you were here you'd have to get

another theory for my bees, for some of them are making preparations for swarming (June 14) when they are almost on the verge of starvation, not a pound of honey in the hive, and no prospect of any immediate improvement.

If bees swarm to save the queens, suppose you try this: Introduce two or more queens by means of excluders, then remove the excluders and see if they'll swarm to save the queens. I don't know, I don't know. Marengo, Ill.

An Experience with Kingbirds.

BY J. A. NASH.

Perhaps I am only writing something that has been discussed over and over again, when I allude to his royal highness, the Kingbird—*Tyrannus intrepidus;* but as I most heartily despise this feathered rascal, if Bro. York will give me the space in which to do so, I will abuse him to my heart's content.

To start fair, I wish to say that I love *all* of God's creatures that are friends of man, and useful to him, but I have little use for birds or beasts of prey. Now I presume the reason this little bird received its high-sounding name was because some one saw it driving a hawk away from its nest—they often do this; so does the blackbird, and several other small birds.

Years ago the kingbirds held full sway in my apiary, along with the wrens, robins, bluebirds and others of the denizens of the wood, that will be so friendly with us if we will only let them, and they (the kingbirds) devoured my bees according to the dictates of their hardened little hearts. I snipped the heads off of several with a rifle, but found nothing to convince me that they eat bees, except a few drones. I felt guilty, and looked up and down the road to make sure no one had seen me killing the pretty creatures, buried the bodies of the slain, and for years after I was a staunch friend of *Tyrannus.*

Now the above is a fair sample of the way some of us conduct our experiments.

Three or four years ago I was nailing hives near the apiary, and noticed a kingbird swooping through the cloud of bees that came dropping down at the fronts of the hives near by, heavily laden with the first honey of spring. My eyesight was good, and I was satisfied that the bird was catching bees, and the only bees to catch that early in the spring were workers. You see the result of the experiment years ago satisfied me that drones were the game which he was hunting, but this time there was no mistake, *sure.* Again the rifle came into service, and again a feathered "king" lost his crown. What was my amazement to find the crop of this bird entirely empty! Now I *knew* the little pirate had been robbing the "merchant vessels" of the apiary, but where was his plunder? I thought of Josh Billings' saying, that "Eney fule kood steel, but it took a wise chap to hide."

Soon another kingbird perched on a convenient branch of a cherry-tree, and again the swooping tactics were exhibited—a rush and a return to his perch. This was kept up a long time, and I was about to fire at him when he ruffled his feathers, shook himself a little, and ejected a mass of something from his mouth, which landed on the flat roof of a hive beneath. Then I fired and picked him up; a knife slit showed the crop practically empty, while on the hive-cover was a mass of crushed worker-bees much larger than I should have thought so small a bird could have held.

Well, the mystery was solved; I had never fired at the right time before, it seems, and had only secured birds that were catching the honey-laden drones as they were leaving the hive for an outing, or else had killed them after they had disgorged their prey. Since that time I have found them with their crops filled with dead bees, and have several times used them as moving targets as they caught bees on the clover bloom. I keep a gun handy to my work, and often kill a half dozen in one forenoon, as they are very plentiful here.

From a clipping in a recent paper, I learn that the Department of Agriculture is preparing Bulletins on several varieties of birds, including the kingbird, stating in the case of this latter one that they *do not* catch bees, as many bee-keepers suppose. I fear their experiments were (like my first one) conducted on a wrong basis. Monroe, Iowa.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Mr. Chas. E. Parks—A Tribute to His Memory.

"A ruddy drop of manly blood
The surging sea outweighs;
The world uncertain comes and goes,
The lover rooted stays."—*Emerson.*

The late Charles E. Parks was born in Morreau, Saratoga county, N. Y., September 12, 1846. He had the advantage of an early education, as he attended Glens Falls Academy, and later the Fort Edward Collegiate Institute. His after life showed that the time spent in school was not wasted. He seems to have selected the profession of civil engineering, but for some reason he gave it up and went back into the school-room—not as a student, but as a teacher. He taught in his native State for a short time, but at the age of 26 he, like many another pushing young man, came west, looking for larger and better opportunities. For a time he continued to find them in the school-room, as his settlement was in Garnett, Kans.; then, making another move, went further west, accepting the position of Superintendent of Public Schools at Golden, Col., and subsequently held the same position in Denver. After teaching for a number of years, he returned to his native State, possibly drawn there by the memories of some of his early associations.

Mr. Parks' experience as a teacher made an impression on him which remained with him all his life. It gave him a poise of character and an ability to govern and control men which was of great value to him in his future undertakings. He surely did not leave the school-room because his teaching was a failure, for anyone who knows the necessary qualifications of a successful teacher would have picked him out as peculiarly suited to that work. He had progressive ideas in teaching. An education with him did not consist in cramming facts into the minds of children as a mother pigeon puts food down the throats of her young. His idea of educating a child was to teach it to think, and he left the mark of this idea wherever he went. It may be readily seen in the lives of the three lovely children he left behind.

Returning to the West in 1877, Mr. Parks married Miss Lilla, daughter of G. B. Lewis, of Watertown, Wis. At the time of his marriage he was engaged in the milling business at Westport, Mo., but remained there only a short time, when he moved to Watertown, to enter into a partnership with Mr. Lewis, his father-in-law, in the manufacture of sash, doors and blinds.

He had now passed the critical point in the history of his life; for it matters not how much experience and education a man may have, his future cannot be fully predicted until he has selected and married a wife. A mistake here may overthrow all that has made for success in the past, just as a good selection sometimes will correct many a blunder, and be the means of starting a very unsuccessful man on the road to prosperity. I presume I may be permitted to say, as a friend who has enjoyed the hospitality of his home, that Mr. Parks made no mistake when he selected Miss Lewis for his wife. She has proven to be a faithful wife and an ideal mother. It must have been something of a consolation to him, when he found that he must leave his children, that he left them in the care of a mother who is especially equipped for the increased obligations which now rests upon her.

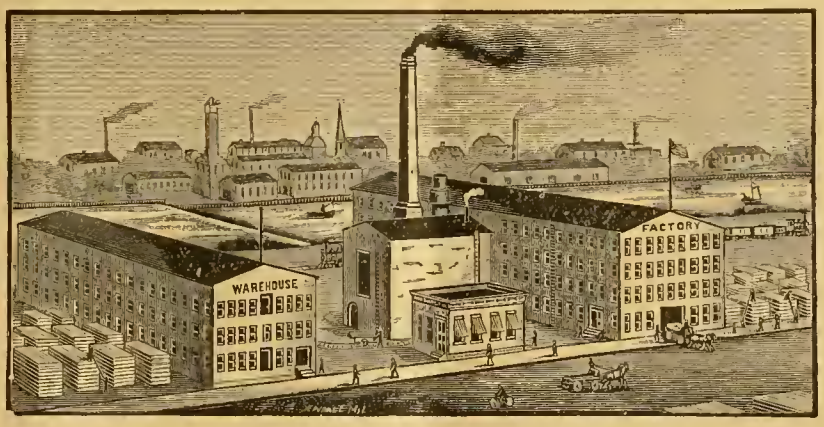
In 1881 Mr. Parks engaged extensively in the lumber business at various places in the northern part of Wisconsin, and seems to have been quite successful; but, if he had not been, his efforts in that direction would not have been in vain; for he was now gathering information which was of great

value to him in the enterprise which has made him known to bee-keepers, and which entitles him to honorable mention among those interested in the advancement of scientific apiculture.

In the fall of 1884 he returned to Watertown and resumed his relations with the firm of Lewis & Parks, which now entered extensively into the business of manufacturing apiarian supplies. The business steadily grew under his management until it became one among the largest in the world, engaged in the exclusive manufacture of a special line of implements used in the apiary, namely, hives and sections. They have manufactured other lines of goods, but have made these a specialty. I presume I will be safe in saying that there is no country in the habitable globe where modern apiculture is prosperous in which their goods are not known.

In 1890, through the work of some reckless boys, the entire plant was destroyed by fire. The business was now incorporated under the name of G. B. Lewis Co., and Mr. Parks was made secretary, treasurer and general manager, he owning one-half of the stock of the company. They rebuilt their factory on a much larger scale, and put in new and improved machinery, since which time, under the management of Mr. Parks, the business has pushed steadily forward and kept abreast of the times.

Mr. Parks had a robust and vigorous constitution, but about a year ago his health began to fail. He was forced to quit business and devote his entire time and energies in an effort to regain, if possible, what he had lost. This, however, was not the first time that he realized that he did not have that



Establishment of the G. B. Lewis Co., Watertown, Wis.

vigor of constitution which he had once possessed; for he said to the writer in a confidential conversation about three years ago that he felt that he must soon give up business and devote more time to recreation, or he should break down. Perhaps, if he had carried out his plans at that time, he might yet be with us, but of course we cannot tell. His malady was one, Bright's disease, so called to conceal our ignorance, which under medical treatment generally proves fatal.

He left his business last fall, went to Florida, had the best of care, and the benefit of skilled medical attendance, but he gradually grew weaker, and in the spring his friends, with great care and attention, succeeded in bringing him back to his home. On the morning of July 1 he quietly closed his eyes to this life; only, I trust, to open them on a richer and better life, untrammelled by the limitations of purely material surroundings.

Mr. Parks was in many respects a remarkable man. He was quiet in his manner; modest in his demeanor; and was a man of few words, as I knew him in a business experience of ten or twelve years. He was open-hearted and plain spoken; detesting every form of sham and pretense. He believed in God and immortality; but religion to him was a personal matter, which he never paraded before the public, and of which he never spoke to the writer but once during all of his intimate acquaintance with him. He was a Mason in good standing, and was laid to rest according to the forms of that body, by the lodge to which he belonged. He was full of dry wit and enjoyed a joke; was true to his friends, and was as tender as a child. The last time I ever saw him was as he stood beside Mr. Newman, bathing his head, when, after his long talk in the meeting of the North American, Mr. Newman was taken sick in the hall of the hotel where the World's Fair meeting of the convention was held.

If I am correct, Mr. Parks never owned a colony of bees, and I doubt if he ever opened a hive which contained bees, but he had inventive genius and keen perceptive faculties, saw quickly what was needed, and what the people wanted. However, there is no question but what certain imperfections may be found in some of his apiarian inventions, growing out of the simple fact that there are some things about a bee-hive which can be learned only by actual work in the apiary,

Mr. Parks had traveled extensively, having made two trips to Europe and many to different parts of the United States in the interest of the various enterprises in which he was interested. While he has been successful in the manufacture of apiarian supplies, yet the bulk of the fortune which he left behind him was made out of his numerous inventions of machinery, etc. I do not know what he realized out of it, but from an intimate knowledge of its great value in many ways, I consider his patents on his basket box, and the machinery by which it is manufactured, worth nearly half a million dollars, as it was patented in Europe and Canada as well as in the United States.

It may be inferred from this that he was successful in business, and he deserved to be, as all that he left behind him was made by honest toil, push and energy. He was not only successful in business, but he had found a place in the hearts of those who knew him best, of which any man might be proud. The following extract from a letter from one of the employes of the factory will tell the story better than I can:

"Mr. Parks had the esteem and good-will of any and all who have ever been in his employ. He was plain and democratic in his manner, and always had a word for everyone. As to his genial good humor and wit, I need hardly say anything about that, in as much as you have had opportunity to judge for yourself. All of his employes were truly sorry to learn that the strong, and apparently well man, who left them last fall had come home to die, and it was with true sympathy that they attended the last services that could be rendered to him. At his request his remains were borne to their last resting place by six of the oldest employes—or 'boys,' as he was wont to call them."

It seems hard to be cut down in the prime of life when there is such great need of loyal, energetic men and women, but I am sure that I am safe in saying that his life has not been in vain. The business with which he was connected has lost a pushing and successful manager; the community has lost a valuable citizen; those who knew him well have lost a true and faithful friend; his three children have lost a kind and indulgent father; and the faithful wife has lost more than anyone can know, who has not passed through the same trials and had the same experience. Yet all of these may find consolation in the fact that he did all he could to make for himself a name and an honorable place among those who are faithful to the duties which the experiences of life laid upon them.

EMERSON T. ABBOTT.

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

When to Introduce Queens—Changing Queens.

1. What month of the year is best to introduce queens?
2. Is it good policy to change queens annually?

M. R. G.

ANSWERS.—1. Almost any time when bees are flying, and perhaps no better time than this time of year.

2. I don't believe it pays to change as often as once a year. Some seem to think it pays to change as often as once in two years, and some think it is better to leave the changing entirely to the bees.

Keeping Drones Out of the Sections.

How can I prevent drones from going into my sections?

My bees are doing finely. They have not swarmed yet. There was a great loss of bees in this section of the country last spring. G. E. L.

Avon, N. Y.

ANSWER.—Why do you want to keep them out of the sections? I never do anything to keep drones out of my sections. But if you don't want yours in sectons, all you need do is to put a queen or drone excluder under your super.

Getting Bees to Work in the Super.

I have one colony that won't work in the super. They have filled the brood-frames, and bracing them together. What is best to do with them? P. R. H.

ANSWER.—You might extract from the best filled frames. If you want the honey put above, put in the super some comb or brood. Just how you will do that depends on what is in the super. If sections, put a piece of comb or brood in one of the sections. Perhaps it may help to uncap at the same time some of the brood-frames that are filled with honey.

Questions on Comb Foundation Making.

1. I have been getting foundation from the A. I. Root Co. Freight and duty on this side add considerably to their invoiced prices. I can buy wax here at one shilling per pound. Should I not preferably make my own foundation?

2. But is not much skill and practice required to enable one to turn out a fairly good article of foundation?

3. What sort of mill or machine would you recommend? The Given or the old cylindrical style?

4. What is the cost of the Given?

5. Should I require two machines, *i. e.*, one for brood and one for surplus?

6. Through whom could I get a good second-hand mill? There are many who have bought mills, found them troublesome to work, and so discarded their use.

This is a poor country for the bee-business. Frequent and prolonged drouths make it a very precarious occupation here. We have only one really choice-flavored white honey, and the shrub which produces it blossoms only once every four years. Some years, in a few favored spots, a coarse flavored brown honey is produced, and sells at 3 pence per pound. Syrup, in tins (quality glucose) makes even that almost unsalable.

S. A. DEACON.

Mossel Bay, South Africa, June 13.

ANSWERS.—1. Not knowing what freight and duty amounts to, I can only guess, and should say if freight and duty double the cost of the foundation, it might be worth while for you to make your own foundation.

2. Skill and practice make much difference, but others have gained skill by practice, and so can you.

3 and 4. I think the Given is not now offered for sale. The nearest that comes to it is the Rietsche, which is quite popular in Germany, and it is claimed that it is very easily operated. The A. I. Root Co. say they have tried it, and that it is unsatisfactory, but I have never seen any objections made against it in the German bee-journals. I don't know whether any but the roller foundation mills are now made in this country, and I know nothing about the cost of the Given.

5. The same machine by being differently geared will make foundation of different weights.

6. I hardly believe there are many second-hand mills for sale. They have found their way into the hands of men who are quietly making foundation for their own use, and perhaps some for their neighbors. Occasionally I see a second-hand mill offered by the A. I. Root Co., and that might be your best chance.

Kind wishes for your success in your far-off African home.

Linden in the South.

I have received the following note:

DR. MILLER:—The next time anybody asks you how far South basswood or linden grows, tell him you don't know. I will take off 1,500 pounds of section honey from the enclosed, about June 20. I am near the line of the 30th degree north latitude, 58 miles north of Houston. H. C. LOGGINS.

Howth Station, Tex., June 12.

ANSWER.—Accompanying the note was a sample of unmistakable linden leaves and flowers. So it seems clear that linden flourishes as far south as latitude 30, and I don't know how much farther. In the same envelope was also a sample of something that looked like vermicelli, but it was probably the same thing as Florida moss, so that I could see that basswood grew where things of a hot climate grew.

Wintering on Sugar Syrup—Queen Mating—Young Bees Playing.

1. Will bees winter on sugar syrup alone without pollen?

2. At swarming time, after the old queen has gone with a swarm, does the newly-hatched queen mate with the drone before she comes out with a swarm, or afterwards?

3. What is meant by a lot of bees coming out at noon every day, and then all going back at once?

SUBSCRIBER.

ANSWERS.—1. They'll get through the winter all right, but when it comes to flying and rearing brood in the spring they must have pollen. They're pretty likely to have enough pollen, even if they are so scarce of honey that they have to be fed.

2. If the colony casts a second swarm, the young queen is not fertilized till the time of swarming, or later.

3. That's the play-spell of the bees too young to be field-workers. They're taking exercise.

Getting Extra Combs Built—Introducing Queens—Old or Young Bees Swarming—Wintering in a Dugout.

Three years ago this month I bought 15 colonies of bees, and commenced bee-keeping, and in order to avoid troubling other folks by too much asking of questions, and still wishing the benefit of their experience, I bought three or four bee-books, and subscribed for two bee-papers; but now I wish to know something that I do not find in the bee-books, and do not remember ever seeing in the papers.

1. I have a No. 1 queen, and if I have the good luck to get her through next winter, I wish to rear queens from her to requeen all my colonies. I have arranged some brood-frames for nuclei colonies, the same size as my other frames (Langstroth size), which I wish drawn out and filled with comb where they can be left for the bees to winter on, and be full of brood by the time I shall want them in the spring, as my swarms are all off and hived. I hardly know how to get it done. If I should take six frames from the center of the brood-nest (leaving the two outside ones) and put them in an upper story, being sure that the queen was left below, put the new frames (filled with foundation) in their place, put on a queen-excluder and the upper story above, would the bees stay below with the queen, and fill up the new frames, or desert her and go above with the brood and rear another queen?

2. Can I, three or four days after a colony has cast a swarm, cut out all queen-cells and safely introduce a laying queen?

3. Is it usually the old or the young bees that go with a

swarm? I have always heard and supposed that it was the old bees that went out.

The queen that I wish to breed from is a yellow one, bought of a breeder in Illinois, and put into a colony of blacks where there was not over two quarts of bees, and perhaps 1½ or two frames of brood; introduced May 31, and July 16 she led off a large swarm of her own bees, now and then a black one amongst them, but I noticed there were as many, if not more, black bees left in the old hive than there were of hers.

4. I winter my bees in a dugout at the foot of a bluff. It is 8x16 feet, dug 2½ feet deep at the front, and 7½ feet at the back. A frame 7 feet high built in the hole, boarded up on the outside, an oak timber laid over the center lengthwise, and roofed over with two-inch plank, and covered up with the dirt thrown out in digging it, and whitewashed inside. I have wintered bees in it two winters. Last winter I lost 4 colonies out of 34 (troubled some with diarrhea). Ventilator is in the center of the roof, 3½x6 inches, inside measure. Will it be sufficient to winter 55 colonies? S. L.

Jarrett, Minn., July 23.

Answers.—1. If I understand you rightly, you want to have combs built now, so they will be ready to be used for nuclei next year. I don't know just why you want to do that, for whenever you want to make nuclei the combs will be all ready in the hives from which you draw your brood. Then the colonies from which you draw will build fresh combs on the foundation given them. Still, they will do better on full combs than on foundation, and if you wish, you can have the combs drawn out now.

In the plan you propose, I think the bees would be distributed above and below, some of them taking care of the brood and some of them staying with the queen. Generally they would be satisfied not to rear a queen above, I think. But they will be rather slow at drawing out the foundation, and the queen will sometimes sulk for several days without laying.

You will get them to make combs for you a good deal more rapidly by putting the frames of brood over another colony. Indeed, you may perhaps get the best work done by taking away every comb they have, leaving nothing but foundation in the hive. But if honey is not yielding you must feed. In any case they'll not do much at building comb without feeding, if the flowers are not yielding.

2. You can introduce a queen then, but you must count on some risk.

3. All sorts, from the veterans with ragged wings to the babies that can hardly fly.

4. I suppose it will winter all it will hold, only when you put in a greater number of colonies they will need more ventilation than a smaller number. The increase of ventilation must be without making too strong a draft directly upon any of the colonies.

Wintering on Eight Frames—Mixing of Bees.

My pa bought one Italian colony of bees on an 8-frame Langstroth hive in the spring of 1894. He increased them to 10, and wintered them all right. He now has 18 colonies.

1. Will they winter in 8-frame hives made of 1-inch lumber, in this latitude (southeastern Kentucky)?

2. How shall we manage to keep our Italians from mixing with the old blacks that are scattered all though this part of the country?

3. Would you advise wintering the bees all in the lower story, and shutting them down from the upper story?

Evans, Ky. P. A.

Answers.—1. A great many colonies have been wintered on no more than 8 Langstroth frames, the only trouble being that you must watch close in the spring to feed if the bees run short.

2. You can't do it. They will mix. You can get fresh stock from time to time, and thus keep a little nearer the mark than if you leave them entirely to themselves.

3. That depends somewhat upon circumstances in each individual case. Perhaps they will do full as well to allow them the two stories.

Little Field-Work to be Done?

I have only 10 colonies, and as most of them are new, I shall realize practically nothing this year. The spring weather was so cold that the bees could not work on the early flow, and there is little honey to be had now. My new colonies are busy at work, but one or two older and strong colonies are hanging out, and fighting most of the time, killing large quantities of bees (workers as well as drones). They are still rearing brood, but no swarms have issued this season from any of my colonies. There is plenty of room in the supers, and they build some comb, but store little honey in the frames, seeming content with the supply in the brood-chamber. This, of course, only applies to the old, strong colonies, as there are no supers on the new colonies, which have at present plenty to do downstairs.

In order to strengthen a weak colony I transposed it and my strongest fighting colony, putting the weak colony in place of the strong one. The fighting and loafing now prevail at the old stand, where I placed the weak colony, although there is lots of room and work to be done within. What is the matter?

Los Gatos, Calif., July 9. H. S. S.

Answer.—I suppose there is little to be done in the field, so the bees try to rob any colony that is not strong enough or active enough to defend itself. A queenless colony is especially likely to be overcome by robbers. Transposing colonies is a very unsatisfactory way to strengthen a weak one.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—Ed.]

Working for Increase of Colonies.

I have 15 colonies of bees, and have increased, by artificial swarming, 8 colonies from one up to date this year. All are doing nicely, and the old colony is still very strong. To increase my apiary is my desire.

How late can I follow this up? If I feed my bees through the winter I would like to increase my apiary to 100 colonies next year. I like the Bee Journal, and can't do without it.

Rosebud, Tex., July 6. Mrs. S. S.

Answer.—The swiftest horse is not always the safest horse. And it is not the best plan to multiply colonies too rapidly. One good, strong colony in the fall is more profitable than a dozen weak colonies in a begging condition. Such colonies, in the summing up, unless the season is very propitious, are usually a dead loss so far as dollars and cents are concerned.

My advice would be, to get your colonies as strong as possible this fall, and with sufficient stores to carry them over the winter until they can gather from natural sources in the spring, and do not depend upon the chances of "feeding through the winter."

How Far Will Bees Travel for Forage?—Honey from Sumac, Aster, Cotton-Bloom, Corn-Tassel and Cowpea.

1. How far will bees travel for honey? There is a quantity of asters within three miles of my bees; will they go that far?

2. What do you think of sumac as a honey-plant?

3. Do bees gather honey from corn-tassel?

4. From cotton-bloom?

5. Please tell me what you think of pea-bloom for honey?

6. Does the aster yield honey every year in this locality when frost does not cut it off? A. P. L., South Carolina.

Answers.—1. When hard up, they will go four miles, but this is too far to go to get honey to an advantage. Three miles is quite a common distance for them to travel. From ½ to 2 miles is the best distance,

2. It is a good honey-plant. The honey is dark in color.

3 and 4. In some seasons these blooms yield honey in sufficient quantities to store in the surplus department.

5. The bloom of the cowpea is of such formation that the proboscis of the hive-bee is too short to reach down to the nectaries; but just beneath the bloom are a number of little glands that secrete a sweet substance that is largely sought after by the bees. I have seen them work on it from morning to night.

6. The aster is a pretty certain honey-yieldor—rarely fails to do its duty.

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Editorial Budget.

The Biographical Sketch of the late Mr. Chas. E. Parks will be found on page 504 of this number of the Bee Journal; also his portrait on the first page. The biography was written by Rev. E. T. Abbott, the personal friend of Mr. Parks, and is exceedingly interesting. It will well repay a careful reading, as Mr. Parks was a successful business man, as well as a practical inventor.

The Eye of a Bee is a very interesting piece of work. A paragraph is going the rounds, which says that every bee has two kinds of eyes—the two large, compound ones, looking like hemispheres, on either side, and the three simple, or single eyes, which crown the head. Each compound eye (as one would naturally suppose from the term which designates it) is really an immense aggregation of eyes, each being composed of 3,500 facets, which means that every eye seen has its image reflected 3,500 times in the bee's tiny brain. Every one of the facets is the base of an inverted hexagonal pyramid, whose apex is fitted snugly to the head. Each of these pyramid facets may be termed a perfect eye, for each has its own iris and optic nerve.

Who Has Honey to Sell?—For four or five weeks in June and July, there was an advertisement in the Bee Journal offering to pay "spot cash" for honey, and asking that samples and prices be submitted. Now it may surprise you, but not a single response was given to that advertisement. The firm offering the "spot cash" are responsible, as I fully know, and it seems strange that among the whole list of Bee Journal readers, there isn't one that has any honey to sell. Is it a fact, that there is no honey in the hands of bee-keepers this year? If you have honey, don't you want to sell it, and get the cash for it? There surely must be honey in some part of this broad country. The conclusion arrived at by the advertiser referred to above was summed up in this sentence: "Something must be scarce besides money—either bee-keepers or bees." It would appear that honey is also "scarce."

Fall Management of Bees is thus commented upon by Mr. B. Taylor, of Minnesota, in the Farm, Stock and Home for Aug. 1:

We do not intend to repeat last year's disastrous experience in having only old bees in the colonies to commence the five or six months that intervenes between housing in the fall and the rearing of mature brood in the spring. We are giving our colonies large room in the brood-chambers, hoping to have them filled with fall honey, and brood-rearing kept up as late as possible, so the hives may have plenty of winter stores and be filled with young bees that will live until younger bees can be reared next spring to take their place, even if drouth or other causes should prevent a flow of nectar. We will feed each colony 8 or 10 ounces of sugar syrup, made by mixing equal weights of granulated sugar and water. We will give this each evening from Aug. 15 to Sept. 15. The expense for sugar will not exceed 50 cents per colony. We have had poor honey crops now for several seasons, and many have quit the business, but we are not discouraged, as we have full faith that old, but sometimes seemingly fickle, Dame Nature will return to her staid ways again.

Ripening Honey.—Prof. Cook, in the Rural Californian for July, says this about the importance of having honey thoroughly ripened:

The nectar which bees collect from the flowers is thin and watery, and must be fully evaporated to make the best honey. This is why the bees do not at once cap over the cells after filling them with honey. They wait till evaporation is sufficient to make the honey of such thickness or "body" that it is in no danger of souring or fermenting after being sealed. The bee-keeper should be equally wise and not extract the honey until it is capped over. This, of course, requires the extra labor of uncapping, and more, for it is easier to extract thin honey than to throw out that which has reached the proper consistency. Thus, there is always the temptation to extract unripe honey.

I know of a very recent case in point: A bee-keeper sold to a large consumer a can of honey, with the advice to leave the screw cover off, or the can might burst. This meant that the honey was likely to ferment, or, in other words, it was unripe honey, and had been extracted too soon. Had the purchaser known the facts, he would have refused to purchase the article.

Apiarian Statistics are somewhat plentiful—if they were only as reliable as they are plentiful then they would be more satisfactory. The following paragraph is taken from the Michigan Farmer; I do not vouch for the correctness of the figures, though probably they are somewhat reasonable:

According to the London Times the yearly production of wax in continental Europe is about 15,000 tons, with a value approaching £1,350,000. Of honey, the annual production is estimated at 80,000 tons, and its value at £2,200,000. In the United States there are about 2,800,000 colonies of bees, producing annually some 30,000 tons of honey. No statistics relating to this part of the industry are collected in Great Britain.

He Got the "Ole Wass."—A negro boy, while walking along the street, took off his hat and struck at a wasp on a weed. Then, putting on his hat, with a look of disappointment in his black face, he said:

"I thought I got dat ar ole wass."

"Didn't you get him?"

"No, sah, but I"—he snatched off his hat, clapped his hand to his head, squatted down, and said in a surprised tone of voice:

"Fi didn't git dat ole wass after all!"

Honey-Bees as Letter-Carriers.—An exchange says that a honey-bee, instead of a carrier-pigeon, for carrying a letter is a new idea. An English bee-keeper has been training bees for this purpose. The insect is taken away from the hive, a letter printed by microphotography is gummed to its back, and she is then thrown in the air.

The Life-Saving Crew at Benton Harbor, Mich., have been successful in capturing two swarms of bees this season. Who has ever thought of utilizing such crews for swarm-catchers? The idea is not patented, I believe!

☞ Why not earn some of the books offered on page 511 of this number of the Bee Journal? Look at the offer.

Among the Bee-Papers

Gleaned by Dr. Miller.

FOUL BROOD FROM BUYING COMBS.

Gleanings mentions a case in which a man got foul brood in his apiary by buying brood-combs from an infected apiary. Can't be too careful.

KEEPING DOWN GRASS IN FRONT OF HIVES.

Is there a more disagreeable job connected with apiculture than keeping clear the front door yards of our little workers? I once covered a yard to the depth of three or four inches with sawdust, and congratulated myself as being master of the situation until after being called at about three o'clock one morning and combating with the fire fiend for hours. Well, I changed my mind—in short, concluded it wasn't just the thing. —Somnambulist, in Progressive.

I remember A. I. Root had the same trouble years ago. Salt keeps down growth in front of hives, but I think I like best an old board, such as the side of a superannuated hive.

HIVES FOR WINTERING.

It is a generally conceded fact that bees will stand almost any degree of cold if well provisioned and kept dry. Reasoning thus, I put half my colonies in the dovetailed hives in 1893, and the only preparations I made was to see that they had plenty of honey, and put two empty supers or one empty hive-body on top and an extra heavy cushion of chaff on the top of the frames, leaving the outer walls of single thickness entirely unprotected.....After trying this experiment in the winter of 1893, I was perfectly satisfied with it, and last winter I worked it on all my hives and must say that my wintering by this plan has been perfect; and when I say "perfect," I mean that 100 per cent. of my colonies came through the winter bright, healthy and strong, and ready for business.—Ed. Jolley, in American Bee-Keeper.

The above is in accord with the practice of C. F. Muth, who gives no protection to the sides of his hives, but gives a good covering on top.

KEEPING HONEYS SEPARATE.

When the comb is capped in part and the remainder of the cells glisten as you look at the surface of the honey, you can consider it ready to extract. The inferior honey should be kept from a better quality, and even at the risk of having the inferior a little unripe we should keep them separate. By holding capped combs up to the light, patches of light may be distinguished from the dark, and by uncapping first one and then the other, the two can be kept separate even after it is stored together in the comb.—Canadian Bee Journal.

THE NORTH AMERICAN CONVENTION.

Says President Holtermann in Canadian Bee Journal:

"Everywhere the prospects are exceedingly bright for the North American Bee-Keepers' Convention, which is to meet at Toronto during the time of the Toronto Exhibition, Sept. 4, 5 and 6. Between the efforts of the able and hard-working Secretary of the Toronto Industrial Exhibition, Mr. H. J. Hill, and the efforts of the many bee-keepers and those having a sturdy influence in particular, the reduced railroad rates will cover a greater amount of territory than expected. A half-fare railroad rate will prevail from any part of Michigan to Toronto, and later we shall doubtless be able to announce many more reductions. We only require a fairly good honey season to have the largest attendance of members the North American has ever had. If you have any question you should like discussed at the Toronto convention, send it to the Secretary, W. Z. Hutchinson, Flint, Mich., or to the president, R. F. Holtermann, Brantford, Ont.

SPEAKING UNKIND WORDS.

Somnambulist comments thus in the Progressive Bee-Keeper:

"In June 20th American Bee Journal we find this editorial assertion: 'I am quite sure that it is always best to shut down on any and every discussion when it clearly appears that there is to follow more disrespectful personal characterizations than legitimate argument.'"

"Correct! Nothing is ever gained by letting out our disagreeable thoughts and feelings. 'Given an inch, they will demand an ell,' every time, and before we know it, we are saying all manner of disagreeable things which really we do not mean, and we have stirred up in the one on whom we have vented our spleen, either wholesome contempt for our lack of self-control, or a spirit of anger and resentment which only recoils on us like a boomerang. To acquire steady control, it requires persistent patience, but in the mere trying there is gained strength. In the indulgence of an unruly temper there is everything to be lost, and everything to be gained through the control of the same."

RENEWING QUEENS IN THE FALL.

Jacob Alpaugh says in Canadian Bee Journal:

"I go around just after the honey harvest is over, and hunt up all the colonies containing old queens, or colonies that did not winter well or do but little for me through the season. All such queens I kill as soon as I can after the flow, before the drones are all destroyed; I just let those hives start and rear cells: about eight days after I go through and destroy all cells where I do not wish any queens reared. Then I go to some hive where I killed an old queen that had previously done well, and take out cells and distribute them in the other hives where I had destroyed all cells. They will all accept them and in a few days will all have young queens and from good stock. Such queens are almost sure to do well for one season, providing they are properly wintered. If I wish to change the blood in a few of my colonies, I would send to some reliable dealer and get queens, and have them ready to put right in when the other ones were killed. My experience in superseding in this way, and at the above time, is this: It prevents the colonies from using up a lot of stores, in rearing young bees only to die off and help to clog up the entrance in the winter. Where there is a fall flow it would probably be better to have young laying queens to replace the old ones.

SOME "STRAY STRAWS" FROM GLEANINGS.

For numbering hives, is there anything better than movable tin tags? If not, what can I buy the numbers for? [Tagboard manilla, 50 cents per 100.—Ed.]

White clover sometimes blooms late, making a second spur as a kind of afterthought. But I never knew this late bloom to be used by the bees; whereas, they seem to work busily on the latest bloom of sweet clover.

Alfalfa looks almost exactly like sweet clover, unless I've been fooled as to what alfalfa is. Why has no one ever told us this? But when alfalfa blooms, the blossom is purple, and the seed-pod looks a little like a snail.

I don't care for color or bands on the outside of bees, only so they have the good working qualities inside. But the outside marks help me to judge something of the inside qualities. [But do you think lots of yellow is an indication of longevity and energy?—Ed.]

Cement-coated nails are among the new things, and I didn't think I'd like them better than rusted nails; but I've been using them, and like them very much. The advantage of being able to use lighter nails with the same holding power is not a small one.

W. W. Woodley complains in British Bee Journal of foundation in center sections left untouched when others are sealed. He thinks it may be that wax sheets were too thick, and pressed when too cold, making the foundation too hard for bees to work—a hint to foundation-makers.

More supersedures are observed with clipped queens than with whole wings, perhaps two to one; for the man who has his queens clipped observes every case of supersedure, and the others are not noticed one time in five. But the queens with whole wings are superseded all the same. [We never clip, but our queens get "superseded all the same."—Ed.]

How thick is worker-comb? On p. 525 Heddon calls it 13-16; Cowan says "about ⅞;" Dadant's Langstroth "about 1 inch," and Prof. Cook wisely says it varies. I think new comb will be found ⅞ thick, (is it ever less?) increasing in thickness with years of brood-rearing till it reaches one inch or more. The increased thickness is all in the septum, the depths of the cells being always the same. [Seven-eighths of an inch is a fair average for breeding combs not over five years. I have measured scores of brood-combs from different hives, and have found them to register almost exactly ⅞.—Ed.]

Honey as Food and Medicine.—A new and revised edition of this 32-page pamphlet is now issued. It has 5 blank pages on which to write or paste recipes taken from other sources. It is just what its name indicates, and should be liberally distributed among the people everywhere to create a demand for honey. It contains a number of recipes on the use of honey as food and as medicine, besides much other interesting and valuable information. Prices, postpaid, are: Single copy, 5 cts.; 10 copies 35 cts.; 50 for $1.50; 100 for $2.50. Better give them a trial. Send all orders to the Bee Journal office.

Canadian Beedom.

Dead Brood That Died of Starvation.

On page 457, I read a short item from J. M., describing a kind of dead brood he found in one of his colonies, and asked Dr. Miller if it is a case of foul brood. Dr. Miller replied that he didnt think it was, and asks "What does Mr. McEvoy think of it ?"

You are right, Dr. Miller ; it is not a case of foul brood. It is what I call a *genuine case of starved brood.* The owner may say that McEvoy is surely very much mistaken about it being a case of starved brood, on account its being found in a colony that had plenty of honey. Now, to explain this, I will have to travel over a line that no man ever took before.

Many years ago, when I found any dead brood in a hive of bees, the first thought that came to my mind was to find out the cause of death, and how to prevent it. By a close examination of the condition of things in the brood-chambers, after the sudden shutting off of honey-flows, and watching the effects of feeding bees at such times, or uncapping the sealed honey in the colonies so as to keep the bees well supplied with plenty of unsealed stores to feed the larvæ well, just the same as they always do when they are gathering and storing honey very fast—I soon discovered that brood often dies of starvation when the honey-flows are badly checked in the breeding season by frosts, very dry weather, or many days of rain. When these checks take place, the bees soon use up the *unsealed* stores, and then they won't uncap the sealed honey fast enough to keep pace with the amount of brood that requires feeding just then ; and then the result will be some starved brood, here and there, right in some of the strongest, as well as in the very weakest, colonies. Some of the starved brood will be found on its back, and turned up a little in cells ready to cap or seal ; in some of the capped cells a small pin-hole will be found in the capping of an odd cell where there is much of the brood starved. The starved brood in some cells will be *white* at first, and sunken down in a shapeless mass, and many of the small larvæ won't have a particle of food, and will look like little, shrivelled-up worms in their cells.

When the colonies have plenty of *unsealed stores*, the brood will always be found plump and very fat, and the most of the small larvæ will be almost floating in food. The very dry season that we have had has dried everything up so that the bees cannot get enough honey in many parts of Ontario to feed the brood rightly.

Many samples of combs with dead brood in them have been mailed to me this summer, with a request from the senders for me to answer at once what it was, after I had examined it. In several cases the samples were starved brood, and the others were pure foul brood. I found one large apiary with nearly all the brood in every colony a mass of decayed matter. This apiary had gotten into a very unhealthy condition, through using old combs with a lot of dead brood in, and the amount of starved brood that was left in the combs to decay after it died. One of these colonies had the genuine article—pure foul brood—it would stretch over one inch when pulled out of the cells. I ordered all the combs to be removed in the evening, and either burned at once or made into wax, and full sheets of foundation to be given in every case except the one that was foul, which was to be given comb foundation starters for four days, and then removed the fourth evening after for full sheets of foundation, and all to be fed while the bees were working out the foundation, as the bees were getting but little honey then.

Where the colonies have not much starved brood in them, I would remove such combs out of the brood-chambers so they could not be used for rearing brood in, and would place them above the queen-excluders, and then fill up the brood-chambers with good, clean combs. But where the old combs have much decayed brood in them, I would "draw the line right there," and make wax of them at once.

"Is it foul brood ?" This is a question that J. F. L. asks Dr. Miller (also on page 457) after he describes a kind of dead brood that he has. The Doctor replied that he would fear the worst, and so would I, if J. F. L. has dead brood going into a real brown corruption.

Every person who keeps bees should have Dr. Howard's book on "Foul Brood." It's the best book on the subject ever published. WM. MCEVOY.

Woodburn, Ont., July 23.

[Dr. Howard's book can be had at the Bee Journal office for 25 cents ; or clubbed with the Bee Journal for a year—both together for $1.10.—EDITOR.]

May Have to Feed—Wintering Bees.

The honey crop is a total failure here this season, and unless something unexpected turns up I will have to feed the bees, or else let them starve ; but I don't intend to let them starve, neither will I use the sulphur pit, as I saw recommended recently. But I will feed them, because they have been good, faithful servants of mine, and I expect in the near future (as I have in the past) to reap a rich reward for all the trouble and expense that I may be put to.

OLD BEES PREFERRED FOR WINTERING.

I would just like to say to B. Taylor, that last season my queens ceased laying in July, and by the middle of August I don't think that there were more than 20 colonies that had any brood. I put 76 into winter quarters, and took 76 out alive, and all in good condition except 8 or 10, some of these latter having kept up brood-rearing late in the fall. The bees that should have come through the winter all right wore themselves out taking care of the baby bees, therefore they died a premature death, and left the colony weak in numbers.

This is the second time that I have wintered bees under the same conditions, and in both cases they came out in good condition. In fact, my bees came out in better condition last spring, and I had less spring dwindling than I ever had before, and I give the bees with age on them the credit. A child can't stand the cold as well as an older person ; a young animal won't winter as well as an older one ; and I would rather have bees with age on them to winter, than to have them expend their energy in brood-rearing, and then die before the winter is half over. If I am right, as Dr. Miller says, stick a pin there. W. SHERINGTON.

Riverside, Ont., July 24.

Liberal Book Premiums are offered on page 511, for the work of getting new subscribers to the Bee Journal. It is a fine chance to get a complete apicultural library. Think of it—50 cents' worth of books given to the one sending a new subscriber ! Remember, please, that *only* present subscribers to the Bee Journal can take advantage of that offer. The publishers of the Bee Journal believe in making it an object for the old subscribers to push for new readers among their neighbors and friends, hence the generous premium offers to them. It is hoped that all may begin *now* to work. Sample copies of the Bee Journal free.

That New Song—"Queenie Jeanette"—which is being sung everywhere, we can send you for 40 cents, postpaid, or club it with the American Bee Journal for one year—both for only $1.10. Or, send us one new subscriber for a year (with $1.00), and we will mail you a copy of the song free.

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We will give to any present regular subscriber to the Bee Journal, 50 cents' worth of the books described below for each NEW subscriber sent us for a year at $1.00. Send on the new subscribers and select the books you want. This is an easy way to get some good books. No premium will also be given to the new subscriber. Now, everybody hustle up!

BEE-BOOKS

SENT POSTPAID BY

George W. York & Co.,

Chicago, Ills.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains 250 pages, and 245 illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, $1.00.

Langstroth on the Honey-Bee, revised by Dadant—This classic in bee-culture, has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages; bound in cloth. Price, $1.40.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages; bound in cloth and fully illustrated. Price,

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of Queen-Bees are reared in perfect accord with Nature's way. 176 pages, bound in cloth, and illustrated. Price, $1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopædia of 400 pages, describing everything pertaining to the care of the honey-bees. It contains 300 engravings. It was written especially for beginners Bound in cloth. Price, $1.25.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is too well known to need further description of his book. He is a practical and entertaining writer. You should read his book. 90 pages, bound in paper, and illustrated. Price, 50 cts.

Rational Bee-Keeping, by Dr. John Dzierzon—This is a translation of his latest German book on bee-culture. It has 350 pages; bound in cloth, $1.25; in paper covers, $1.00

Bienen-Kultur, by Thomas G. Newman.—This is a German translation of the principal portion of the book called BEES OF HONEY. 100 page pamphlet. Price, 40 cents.

Convention Hand-Book, for Bee-Keepers. Thomas G. Newman.—It contains the parliamentary law and rules of order for Bee-Conventions—also Constitution and By-Laws, with subjects for discussion, etc. Cloth, gold-lettered. Price, 25 cts.

Amerikanische Bienenzucht, by Hans Buschbauer.—Printed in German. A hand-book on bee-keeping, giving the methods in use by the best American and German apiarists. Illustrated; 138 pages. Price, $1.00.

Thirty Years Among the Bees, by Henry Alley.—Gives the results of over a quarter-century's experience in rearing queen-bees. Very latest work of the kind. Nearly 100 pages. Price, 50c.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cts.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. Price, 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 25 cts.

Honey as Food and Medicine, by T. G. Newman.—A 32-page pamphlet: just the thing to create a demand for honey at home. Should be scattered freely. Contains recipes for Honey-Cakes, Cookies, Puddings, Foam, Wines, and uses of honey for medicine.

Prices, prepaid—Single copy, 5 cts.; 10 copies, 35 cts.; 50 for $1.50; 100 for $2.50; 250 for $5.50; 500 for $10.00; or 1000 for $15.00.

When 250 or more are ordered, we will print the bee-keeper's card (free of cost) on the front cover page.

Emerson Binders, made especially for the BEE JOURNAL, are convenient for preserving each number as fast as received. Not mailable to Canada. Price, 75 cts.

Preparation of Honey for the Market, including the production and care of comb and extracted honey. A chapter from BEES AND HONEY. Price, 10 cents.

Bee-Pasturage a Necessity.—This book suggests what and how to plan It is a chapter from BEES AND HONEY. Price, 10 cents.

Swarming, Dividing and Feeding.—Hints to beginners in apiculture. A chapter from BEES AND HONEY. Price, 5 cents.

Bees in Winter, Chaff-Packing, Bee Houses and Cellars. This is a chapter from BEES AND HONEY. Price, 5 cents.

The Hive I Use, by G. M. Doolittle. It details his management of bees, and methods of producing comb honey. Price, 5 cents.

Commercial Calculator, by C. Ropp.—A ready Calculator, Business Arithmetic and Account-Book combined in one. Every farmer and business man should have it. No. 1, bound in water proof leatherette, calf finish. Price, 40 cts. No. 2 in fine artificial leather, with pocket, silicate slate, and account-book. Price, 60 cts.

Green's Six Books on Fruit-Culture, by Chas. A. Green.—Devoted 1st, to Apple and Pear Culture; 2nd, Plum and Cherry Culture; 3rd, Raspberry and Blackberry Culture; 4th, Grape Culture; 5th, Strawberry Culture. 129 pp.; illustrated. 25 cts.

Garden and Orchard, by Chas. A. Green.—Gives full instructions in Thinning and Marketing Fruits; Pruning, Planting and Cultivating; Spraying, Evaporation, Cold Storage, Etc. 94 pages, illustrated. Price, 25 cts.

Capons and Caponizing, by Dr. Sawyer, Fanny Field, and others.—Illustrated. All about caponizing fowls, and thus how to make the most money in poultry-raising. 64 pages. Price, 30 cts.

How to Propagate and Grow Fruit, by Chas. A. Green.—Brief instructions in budding, grafting and layering; also propagation of fruit trees, vines and plants. 72 pages. Price 25 cts

How We Made the Old Farm Pay, by Chas. A. Green,—Gives his personal experience on a fruit farm which he made yield a generous fortune. 64 pages; illustrated. Price, 25 cts.

Our Poultry Doctor, or Health in the Poultry Yard and How to Cure Sick Fowls, by Fanny Field.—Everything about Poultry Diseases and their Cure. 64 pages. Price, 30 cts.

Poultry for Market and Poultry for Profit, by Fanny Field.—Tells everything about the Poultry Business. 64 pages. Price, 25 cts.

Turkeys for Market and Turkeys for Profit, by Fanny Field.—All about Turkey-Raising. 64 pages. Price, 25 cts.

Book Clubbing Offers.

The following clubbing prices include the American Bee Journal one year with each book named. Remember, that only ONE book can be taken in each case with the Bee Journal a year at the prices named. If more books are wanted see postpaid prices given with the description of the books on this page. Following is the clubbing-list:

1. Langstroth on the Honey-Bee	$2.10
2. A B C of Bee-Culture	2.00
3. Bee-Keeper's Guide	1.75
4. Bees and Honey [Cloth bound]	1.65
5. Scientific Queen-Rearing	1.65
6. Dr. Howard's Foul Brood Book	1.10
7. Advanced Bee-Culture	1.30
8. Amerikanische Bienenzucht [Germ.]	1.75
9. Bienen-Kultur [German]	1.25
10. Rational Bee-Keeping [Cloth bound]	2.00
11. Rational Bee-Keeping [Paper bound]	1.75
12. Thirty Years Among the Bees	1.30
13. Bee-Keeping for Profit	1.15
14. Convention Hand-Book	1.15
15. Poultry for Market and Profit	1.10
16. Turkeys for Market and Profit	1.10
17. Capons and Caponizing	1.10
18. Our Poultry Doctor	1.10
19. How We Made the Old Farm Pay	1.15
20. Green's Six Books on Fruit-Culture	1.15
21. Garden and Orchard	1.15
22. How to Propagate and Grow Fruit	1.15
23. Rural Life	1.10
24. Emerson Binder for the Bee Journal	1.60
25. Commercial Calculator, No. 1	1.25
26. Commercial Calculator, No. 2	1.40

General Items.

Gathering Lots of Honey.

The bees are doing well at this time, gathering lots of honey, but it is very dark; it is very thick and good—so thick I cannot extract to do any good, as the extractor will not throw it out, and it will not go through the strainer at all.

MRS. A. A. SIMPSON.

Swarts, Pa., July 20.

Short Crop—The Cut-Worm.

We ought to get a good price for honey this season, judging from Eastern reports, and short crop in this section. The army or cut worm did sad havoc with the sages near the Coast, by eating the blossom-buds, and eating into and cutting off the blossom stems. M. H. MENDLESON.

Ventura, Calif., July 12.

Bees are Booming.

Bees are doing well this year. The alfalfa is furnishing more nectar this season than it has for four years. My bees started in the sections earlier this year than ever before. I have had 36 swarms so far. I have 78 colonies, and they are filling the air with music. It has been raining and cloudy for three days, so they cannot go to the field. There is about 125 acres of alfalfa left for seed within reach of my bees this season.

C. C. ZINN.

New Windsor, Colo., July 12.

Cured by Changing Queens.

On page 450 Mr. D. B. Weber said his colonies were all sick. Well, my colonies had the same thing two years ago. I was afraid it was foul brood, so I gave all such colonies sheets of foundation, and new hives and frames, but that did not stop it, so I killed the queens, and gave them young ones, and they cleaned house in no time, and are all right yet. A man 11 miles from my place had one colony that had the brood die the same say, in 1894. I told him to kill the old queen and give them a cell or a young queen. He did so, and he left the old combs in the hive; they cleaned house the same as mine, and are all right.

Golden Gate, Minn. OTTO BANKER.

"Good Time Coming" is Here.

The unexpected has happened again. The "good time coming" is here—partly. Instead of having to buy sugar for the bees, I shall have honey to sell, and I shall not have to eat any sorghum molasses unless I want to. The copious rains which fell about the middle of June, brought out a good deal of white clover later in the month, and we had clover and basswood bloom here all in a heap. For the last three weeks every bee in the yard has been quivering with excitement, and I have been so busy that anybody visiting me now would find "weeds and things" enough around to "mark the locality."

Twelve colonies that have swarmed have given me 24 swarms, and they do not seem

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to be done yet. The old colonies that have not swarmed, and all the early swarms, have each two supers on, the upper ones being filled, or nearly so. I think I can trace some of this satisfactory condition of things to the feeding which I did last season, late in August and early in September. My bees went into winter quarters very strong in numbers, and came out of winter quarters in a like condition. They were ready for work when there was work to be done. EDWIN BEVINS.

Leon, Iowa, July 12.

Crop Almost a Failure.

The honey crop is almost an entire failure in this locality, owing to the long-continued dry weather. DR. O. S. BROWN.

Londonderry, Ohio, July 15.

Best Crop in Five Years.

We have had the best honey crop here in in five years. The average per colony is 70 pounds of comb honey, and over 100 pounds where the extractor was used.

R. B. LEAHY.

Higginsville, Mo., July 12.

Bees Doing Well, Etc.

Bees in this locality are doing well. I have been selling honey at 15 cents for choice white. The Des Moines market is slow at that price, on account of inferior grades of honey having been shipped in, and selling for 10 to 12½ cents.

R. H. LONGWORTH.

Polk City, Iowa, July 15.

Everything Dried Up, Etc.

Everything is dried up except corn. I am feeding my bees to keep them from starving. Did my bees go to basswood for honey? It is seven miles on an air line. Some of them went up out of sight, and when they returned came down from above. My winter loss was 15 colonies, or about 33⅓ per cent.; but it was my fault.

There is quite a good deal said in regard to bees working on strawberries. I have one-half an acre by the side of my bees, and they work on them as long as they are in bloom. A. S. STRAW.

Edwardsburg, Mich., July 8.

Winters Without Loss—The Season.

I have been in the bee-business the past 20 years, and have had a great many ups and downs—all the way down—until six years ago, when, in the fall of 1889, I had discovered how to winter bees to perfection without the loss of any. I placed in winter quarters 28 colonies last November, and kept them there undisturbed until March 20, and I did not lose one quart of bees from the 28. Some time in the near future I will make known how this is done, so that others can try it also. I do not want to keep it to myself, as it is "too good to keep."

My bees did not do anything this season until a week ago. I do not expect very much from them as long as this drouth lasts. We have not had one inch of rainfall here since last October. My bees came

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out of winter quarters in first-class condition, and were all ready to swarm when the frost struck, May 12; in fact, I had hived two swarms before the frost, but that two weeks of cold weather settled the swarming question. They commenced destroying the drones right off, so no more increase this season. H. J. LANG.

Monticello, Iowa, July 8.

Heavy Rains in Kansas.

Very heavy rains are now falling throughout this section. J. H. WING.

Syracuse, Kans., July 23.

Not Discouraged.

The honey season is closing in Callfornia. Our anticipatious of a large honey-yield have not been realized, yet we have "raised enough honey" to prevent discouragement.
ELLEN C. BLAND.

Fernando, Calif., July 17.

A Correction.

On page 450, in the item headed "Five-Banded Bees," there is a mistake. I meant to say if it were *no* more trouble to rear queens that produced all 5-banded bees than it is to rear queens that produced bees with two or three bands, the five-banded would lead.

The American Bee Journal is a welcome visitor to my house every Friday.

Mt. Aerial, Ky. J. W. HENSON.

Getting Honey from White Clover.

Bees came through the winter in fine condition. They are getting a large quanity of honey from white clover. The prospects for a big honey-flow this fall are good.
ALVIN T. BALL.

E. Blackstone, Mass., July 8.

Bees Doing Poorly.

Bees are doing poorly in western Connecticut this season. They started off well in the spring, reared brood rapidly, and a good crop of honey was looked for. The dry weather came on, and the white clover was a failure—no basswood, and now we must look for the fall honey-flow for winter stores. The hives are full of bees, and nothing to do, any more than to get their living. H. H. KNAPP.

Danbury, Conn., July 8.

Uniting Swarms.

I read an article on page 458, regarding uniting colonies, which was of particular interest to me, as I have been uniting all swarms that came out since the 15th, and the smaller ones since the 10th. Where the cluster is not too far from the stand, I take to it a hive with a small colony, just as I would an empty one, and spread a sheet and set the hive on it, then shake the cluster in front of it. I use considerable smoke on both colonies—most on the outside one—and have not failed to have them go right in and go to work without any fighting at all. I have not found more than a dozen dead bees in front of any hive afterwards. I, of

Convention Notices.

CALIFORNIA.—The next meeting of the Tulare County Bee-Keepers' Association will be held in Visalia, Aug. 14, 1895. All interested are invited. J. E. YOUNG, Sec.
Visalia, Calif.

TEXAS.—The Texas State Bee-Keepers' Association will meet at Greenville, Tex., Aug. 21 and 22, 1895. Good premiums are offered for best exhibits. All are invited to attend.
Deport, Tex. W. H. WHITE, Sec.

ILLINOIS. — The annual meeting of the Northern Illinois Bee-Keepers' Association will be held at the residence of O. Taylor, in Harlem, Ill., on Tuesday, Aug. 20, 1895. All are cordially invited. B. KENNEDY, Sec.
New Milford, Ill.

TENNESSEE.—The next annual meeting of the East Tennessee Bee-Keepers' Association will be held at Mulberry Gap, Tenn., on August 16, 1895. The members are urged to attend and all bee-keepers are invited to be present. H. F COLEMAN, Sec.
Sneedville, Tenn.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association in Fort Scott, Kans., on Sept. 19, 1895. All are cordially invited to come and have a good time. There will be a full program.
Bronson, Kans. J. C. BALCH, Sec.

WISCONSIN.—The Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting at Platteville, Wis., Oct. 8 and 9, 1895. "Come, every one." Don't get discouraged if we haven't got a crop of honey. We will have a good time at Platteville, just the same. Bring your wives and daughters with you. Many interesting subjects will be discussed. M. M. RICE. Sec.
Boscobel, Wis.

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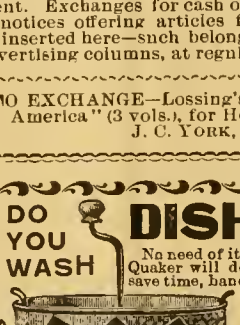

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course. return the hive to its old stand as soon as possible.

I have in each case. except the last swarm, taken the queen from the hive, as I was more certain to find her. though in one case I should have preferred to have kept the queen in the hive.

The last swarm I hived at a considerable distance from home, in a small box. and took it home, and as I preferred the queen in the hive. I shook the box in front of the hive, intending to catch the queen in the new colony as she was about to go in. but she eluded me and got into the hive with the others. The next morning I looked through the hive and found the old queen attending to business undisturbed in one side of the hive (she is a full-blood grey Carniolan), and the other (a 3-banded Italian) enclosed in a ball of bees, nearly all of which were her own breed. The others were mixed all through the hive. I rescued her from the hands of her friends, and put her into a cage and introduced her to another colony.

The article referred to (on page 458) showed me that I could safely let both queens into the hive without danger to the united colony; and the above experience shows that I have at least a good chance of saving the queen that I prefer in such cases.

E. L. DUNHAM.

Greeley. Colo., July 20.

Queens and Queen-Rearing.—If you want to know how to have queens fertilized in upper stories while the old queen is still laying below; how you may *safely introduce* any queen. at any time of the year when bees can fly; all about the different races of bees; all about shipping queens. queen-cages, candy for queen-cages, etc.; all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.: or, in fact, everything about the queen-business which you may want to know—send for Doolittle's "Scientific Queen-Rearning"—a book of over 170 pages, which is as interesting as a story. Here are some good offers of this book:

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Bee-Keeper's Guide—see page 512.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., June 7.—We have our usual dull season which we look forward to and expect. Honey is entirely forgotten during the months of June, July and August. The market is pretty well cleaned up of all grades of honey, so the prospects are encouraging for the coming season. We are getting 13@14c. for light comb. J. A. L.

CHICAGO, ILL., May 23.—The trade in comb honey is very light at this time of the year—as it is between seasons. Soon we will get the new crop, and it will come on a bare market. Just now what little comb sells brings 14c. for the best grades. Extracted, 5½@7c. All good grades of beeswax, 30c.

R. A. B. & Co.

CHICAGO, ILL., July 30.—We are now having some inquiries for comb honey, and expect our first receipts of fancy white to sell at 15c.; No. 1 white will bring 14c.; no trouble to sell fancy honey; No. 2 quality sells at 10@13c., depending upon condition. White extracted, 6@7c., depending upon flavor; dark, 5@6c. S. T. F. & Co.

CINCINNATI, O., July 8.—There is a good demand for extracted honey at 4@7c., with a small supply on the market. Demand is fair for choice white comb honey at 12@14c.

Beeswax is in good demand at 25@30c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, MO., July 20.—Old stock of honey well cleaned up. Some new comb on the market. We quote: New comb, No. 1 white, 1-lbs., 14@15c.; No. 2, 12@13c.; No. 1 amber, 12@13c.; No. 2, 10@11c. Extracted, white, 6@6½c.; amber, 5@6c.

Beeswax, 22c. C. C. C. & Co.

PHILADELPHIA, PA., June 18.—The new crop of comb honey is arriving slowly, and is in fair demand. No new extracted honey has arrived in this market as yet. We quote: Comb honey, 9@13c. Extracted, 4½@6c.

Beeswax is still declining. The adulteration of beeswax has demoralized our market this spring, and has hurt our sales considerable. Price, 25@27c. W. A. S.

NEW YORK, N. Y., July 6.—The market is about bare of comb honey and there is no demand at the present. The market is quiet on extracted. Demand is limited, with plenty of supply arriving to meet the demands and more. We quote: California, 6@6½c.; Southern, choice, 60@65c. per gallon; common, 50@55c. per gallon. Beeswax is declining and selling at from 29@30c, at present, but the indications are that the price will decline still further. H. B. & S.

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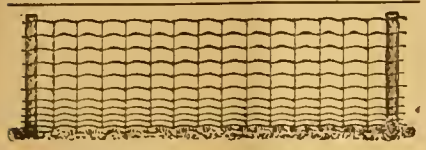

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Query 983.—What is the highest point I can keep the thermometer steadily throughout the winter in the cellar without danger of setting the queen to laying?—Mich.

E. France—I don't know.

B. Taylor—I do not know.

Jas. A. Stone—I do not know.

Rev. M. Mahin—I do not know.

Mrs. L. Harrison—At about 40°.

Chas. Dadant & Son—40° to 45°.

C. H. Dibbern—Not much above 45°, Fahr.

Dr. C. C. Miller—I think I've read about 50°.

W. G. Larrabee—I never wintered bees in the cellar.

Dr. J. P. H. Brown—I should keep about 40° or 45°.

J. M. Hambaugh—I have never experimented along that line.

Mrs. J. N. Heater—I don't know, but 45° is a good temperature.

Prof. A. J. Cook—They seldom breed with the thermometer at 45°, Fahr.

J. E. Pond—As I have never wintered bees in a cellar, I know nothing of the matter.

J. A. Green—I have not had enough experience in cellar-wintering to answer definitely.

P. H. Elwood—That depends largely upon the construction and ventilation of your hives.

R. L. Taylor—I don't know that the laying of the queen depends on that. Keep it at 42° to 45°.

G. M. Doolittle—I aim at a temperature of 45°, and consider that the best temperature for cellar-wintering.

Eugene Secor—45° is about right. If the queen does begin to lay the latter part of March, I think it is all right.

Wm. M. Barnum—I have never yet wintered a colony in the cellar or other repository; but should say about 45°, Fahr.

W. R. Graham—I will have to give Dr. Miller's answer—"*I don't know*"—as I live in the South, and have no experience in that line.

Rev. E. T. Abbott—I do not know. I just let Old Probabilities regulate the weather, and leave my bees out in it with plenty of food of the *right kind* in the *right place*.

G. W. Demaree—I really don't know. But in ordinary winters in Kentucky, the queens begin to lay (sparingly) in January, and will show some brood through February, March, etc.

H. D. Cutting—In a damp cellar, 45°, I always prefer to have them begin in the cellar. With a cross of Syrians and Italians I have had ¼ complement of brood when bees were put out about April 1 to 8.

Allen Pringle—In the case of queens which have passed one winter, say 55° to 60°. In the case of queens reared the latter part of the season, which have not passed a winter, 45° is as high as would be safe. In the first case, when wintering on sugar syrup with very little pollen in the hive, the temperature may be 10° to 15° higher, and the same in the second case.

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Five cross-bars are rivited in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through.

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Select tested queen, previous season's rearing .	4 00
Extra Selected for breeding, THE VERY BEST..	8 00
About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.	

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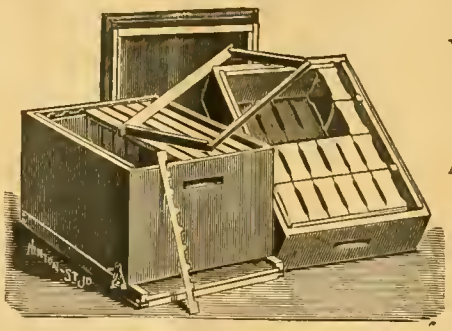

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E. F. Quigley, Unionville, Mo.
G. K. Hubbard, Fort Wayne, Ind.
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Thin Flat-Bottom Foundation

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Honey to secure the completion of unfinished sections can be made very profitable if rightly managed during the hot weather of July and August. In "ADVANCED BEE-CULTURE" may be found complete instructions regarding the selection and preparation of colonies, preparation of the feed, manipulation necessary to secure the rapid capping of the combs, time for removing the honey, and how to manage if a few sections in a case are not quite complete; in short, all of the "kinks" that have been learned from years of experience and the "feeding back" of tons of honey. Price of the book, 50 cts.

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Remember that I am selling Nice, Yellow, Tested Italian Queens, of this year's rearing, at $1.00 each, or six for $5.00, and sending them by return mail EVERY TIME—have been doing so for two months. "ADVANCED BEE-CULTURE" and one Queen for $1.25. The Book, Queen and REVIEW one year for $2.00. **W. Z. HUTCHINSON, FLINT, MICH.**

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AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS

35th Year. CHICAGO, ILL., AUG. 15, 1895. No. 33.

Contributed Articles.

On Important Apiarian Subjects.

Uniting Colonies of Bees in the Fall.

BY G. M. DOOLITTLE.

A correspondent writes thus: "My bees have done very poorly this season as to honey, and seem light in bees. As we do not have much, if any, fall honey here, I do not expect the bees will get more than a living from now out, and I must either unite my bees or feed them for sufficient stores for winter. As I have more bees than I wish, I have resolved to unite them until they have honey enough so f do not need to feed. I wish you would tell us through the columns of the American Bee Journal the best plan for uniting in the fall of the year."

f have tried many plans of uniting bees, but prefer the following to any other for fall use, especially where the colonies to be united are rather light in bees:

In the first place, the queens in a part of the colonies are to be taken away and disposed of in some way, either by selling them or destroying. If sold, of course you will sell only good queens; but if killed, then the poorest are the ones to select out. By thus selecting and killing the poorest we can improve our apiary in quality, as well as to save buying sugar to feed. But were there no difference in the queens I would remove all but those I expected to winter over, for so far as I have practiced this plan, I find that queenless bees are less inclined to quarrel, and are more disposed to stay where put, than are those having queens.

Having the queens disposed of, from the colonies which are to be united, wait three days to a week (three days in any event, so the colonies may realize their queenlessness) for some cool, cloudy day, when it is a few degrees colder than the bees desire to fly in, when you will find the bees all clustered compactly, something the way they are in winter. When taking the queens away, take all the combs from the hive but three, unless the colony is too large, leaving only those which contain the most honey. The combs left are to be spread apart from ¾ to an inch, setting them out two or three inches from the sides of the hive, so that the bees may be all clustered on these combs instead of hanging to the sides, or any part of the hive. The hive which is to receive these bees and combs is to be also prepared beforehand, by taking away all the combs but three or four, those left being the ones having the most honey in them, said combs being placed close to one side of the hive.

When the right day arrives as to temperature, light the smoker and put on your bee-veil, for in following the plan described you may not be able to use the hands to get a stinging

Large Blue Flag—(*Iris Versicolor*)—*See page 527.*

(Copyrighted by Charles Scribner's Sons, New York.)

"Born in the purple, born to joy and pleasure,
Thou dost not toil nor spin,
But make glad and radiant with thy presence
The meadow and the lin."—*Longfellow.*

bee off the face as you otherwise would; but during a part of the operation, both hands will be so employed that you cannot use them at anything else. Now go to the hive having the queen and uncover it, giving the bees a little smoke to keep them quiet, and leaving the hive open so that you can set the other frames right in without any hindrance. Next go to one of those you took the queen from, blowing smoke in at the entrance quite freely while uncovering the hive. Blow a few puffs of smoke around the combs and over them, when the smoker is to be set down, and the front fingers placed between the first two frames near their ends, the large fingers between the second and last frames, while the third and little fingers are placed beyond the third frame. Now close up with the thumbs and all of the fingers, thus lifting the frames and cluster of bees all out of the hive at once, when they are to be carried to the open hive where they are to stay, and set down in it all together, close up to the frames of bees that are in this hive. Go back and get the smoker, and blow smoke enough on the bees to keep them down, when you can arrange the frames, division-board and hive, as you like, without very many, if any, bees flying.

Should a few bees stick to the hive you took the frames out of, bring the hive to the one having the united colony in it, and brush them out on top of the frames, as they will be pretty well chilled by this time. In doing this you will have to smoke those in the united colony pretty well, or many will fly at you, for these partly-chilled bees will throw their poison out on their stings so that the scent of it will anger the bees of that colony that are in the united hive.

If you fixed all as it should be when taking the queen away and preparing for uniting, and smoked the bees as I have told, there will be only now and then one that will require this last operation, as all will be snugly clustered on the combs.

Close the hive as soon as you have things fixed to suit you, when everything is to be removed from the stand of the colony that was united with the other, so that, when the bees come to fly on the first warm day, they will find that all which looks like their old home is gone. Some bees will fly or hover over the old spot where home was, but, not finding it, will return to the united colony, having marked their new location enough on flying out to know where to go, seeing the old home is not found.

In this way I never have had any quarreling of bees, nor any queens killed, and it is so simple and easy that I like it much the best of any plan of uniting bees in the fall, and here give it in time so that all who wish can take advantage of it.

Borodino, N. Y.

The Bee-Keepers' Union—Some Suggestions.

BY J. W. ROUSE.

I have been thinking of the Bee-Keepers' Union for quite awhile, as to how it might become more popular, and so more effective in its operations. I received a letter some time since from a person living in a neighboring city, asking bee-keepers for help; the writer stating that he had been sued by a neighbor for keeping bees inside the city limits. Now, had he belonged to the Union, I presume his difficulty would have been soon and easily settled, as very few care to buck against the Union.

I do not know that I can give a plan whereby the present difficulty of so few bee-keepers taking interest and paying membership fees can be remedied, but I wish to offer a few suggestions for consideration.

I see it already stated in the Bee Journal that it might be advisable to reduce the membership fee. I feel sure if the membership fee was reduced to 50 cents, instead of $1.00, that three or four times as many bee-keepers would become members, and it seems to me it should be ten times as many, or more, than there are now.

Then, I have another plan to offer, which is, to reduce the membership and annual dues to 25 cents, empowering the Secretary to draw on each member for 25 cents more per year if found necessary. It seems to me this proposition should secure thousands for membership. Now, while if this plan should be adopted, in making a call for the second 25 cents some might not respond, the by-laws could be the same as now—where one failed to respond, the benefits to be derived from the Union to cease in his behalf after so long a time after payment of dues should cease, or have failed to have been paid.

Then, again, it seems to me there should be a standing inducement made in the form of an advertisement in one or more bee-papers, to induce bee-keepers to join the Union, and this should be paid for, as it seems to me it is asking too much of the bee-periodicals to keep working for the Union without compensation.

As to uniting the Union with the North American, I am afraid it would not be the best; however, if it should be, it seems to me the vote for officers should be conducted as now, for there will be very few (comparatively) of the members of the Union that will likely ever be at a meeting at any one time. Again, while there may be none who would belong to the North American but what would also belong to the Union, there would be many that would join the Union who would not join the North American.

Mexico, Mo.

What Dr. Miller Thinks.

SUPERSEDING QUEENS.—Jas. F. Wood gives some good advice on page 485. Some might prefer to modify his plan a little, and save the trouble of looking up the old queen. Put a queen-cell in a cell-protector in the hive, and trust to the young queen killing the old one. Doolittle says this will be a success if it be done *after* the honey harvest. By this latter plan the colony need not be queenless quite so long.

I have some doubt whether many bee-keepers would endorse his idea of preferring pure blacks to breed from in preference to hybrids.

YELLOW BEES.—I don't know that S. E. Miller meant to give any such impression, but I think one might get the impression from page 487, that all the 5-banded or very yellow bees were from one source. Indeed, I had at one time the impression that such a claim was made, but Mr. Doolittle says he never claimed that all the 5-banded bees were of one origin, but that all such that came from Italian stock were. I suppose there may be 5-banded bees with no Italian blood in them.

SIGNS OF WORKING IN BOXES.—On page 489, S. R. P., Georgia, says: "When I put on a box and want to know if the bees have gone to work in it, I place my ear close to the box, and if they are not at work in it I can hear them scratching and clawing. That word "not" must have got in accidentally, for the "clawing and scratching" is evidence of their being at work.

[Yes, that "not" should not have been put in. It was not in the copy.—EDITOR.]

GIVE PARTICULARS.—On page 489, H. F. Coleman gives an example of what is quite common among those who write for the bee-journals. He says bees have done reasonably well, and reports a crop of 1,600 pounds. If he had given us the number of colonies from which those 1,600 pounds were taken, then we could have some idea of what he means by reasonably well. If he had said he had an average of so much per colony, without saying anything about the total crop, we

would have a better idea than to know only the total crop. Better than all would be to say, "I averaged so much per colony from so many colonies." For a man might get an average of 300 pounds with only two colonies, but only an average of 50 pounds if he had 100 colonies on the same ground. Sometimes, too, it makes quite a difference about understanding a thing to have dates given. Friends, please give us all the items needed for a full understanding.

[Suppose, Doctor, you give your 1895 report as an example for others to follow, as to style of expression.—EDITOR.]

DON'T JUMP AT CONCLUSIONS.—On page 486, Jas. F. Wood advises to breed from pure blacks rather than from hybrids, no matter how desirable the hybrid colony. Three pages farther on, B. T. Stone says a high grade of hybrids are the best honey-gatherers in existence. I suppose by a high grade of hybrids he means those in which the Italian blood predominates, and I don't know of any possible way of getting such bees without breeding from hybrids. Very likely each one has had experience that he thinks justifies him in holding his present view, but it is quite possible that further experience might make one, or even both, change views. One great trouble in bee-keeping is that one can seldom feel safe in settling down in any one belief without the fear that the next day's experience will upset that belief.

BE FAIR, BRO. ABBOTT.—When I read that arraignment of Root's "A B C," on page 495, for calling a worker-bee "he," I said, "Sick 'im!" But I protest, Bro. Abbott, against being made to share in any responsibility for what is just as great a crime in my eyes as in yours. Please understand that when I read a book for errors it doesn't follow that the author must always think just as I do, nor that I am responsible for his error if he persists in it. I entered a decided protest against calling a "she" "he," and that's all I could do. Pummel away at the Roots all you like—they deserve it richly; but please let up on Doolittle and me.

CLIPPING QUEENS.—On page 494, quite a plea is made against the practice of clipping queens' wings, winding up with an argument from "Mrs. Anna Dickinson." (Isn't the gentle Anna still a Miss?) I admit that it pains a queen to be clipped, and that she is a millionth of a degree less beautiful, but that's a very small thing compared with the advantage of feeling that she can't fly away with a swarm some fine day when you're not looking.

As to the matter of looks, that's not only mere sentiment, but I think it's largely imagination. When the large wing on one side is clipped, leaving the smaller one intact, you must look somewhat closely to see whether she is clipped or not. More than once I have caught a queen to clip her, supposing all her wings were whole, when, on catching her, I have found that the large wing on one side was already clipped. So that doesn't look as though her looks were much changed by the clipping.

Isn't there some imagination in the case, too, when the writer talks of the "probable" effect of weakening the wing-power of worker or queen by clipping? If such "unfavorable results may be induced within the brief space of one or two seasons," ought not some of the many who have continued the practice through many times "one or two seasons," have so reduced the wing-power that it could not fail to be noticeable? Colonies have been known to continue in existence for years without swarming, and in such case the queen has never flown except once in her life. Have the progeny of such queens a diminution of wing-power? And if the wings are never to be used after the one flight, what difference whether they are longer or shorter? I don't think I'll stop having my hair cut for fear my posterity may have to wear wigs.

HOW MUCH?—I've no objection to the advertising of good books in the reading columns whenever publishers so desire, but when you go so far as to awaken interest in a book, why not finish up the matter by giving the price, so we may know whether it comes within the limit of our pocket-books? This is anent that wild flower book on page 495; also previous cases. [Bro. Abbott will please tell "how much," hereafter.—EDITOR.]

Marengo, Ill.

Apiarian Exhibits at the Illinois State Fair.

BY GEO. F. ROBBINS.

I want to urge the bee-keepers of Illinois to make the best possible exhibit at the State Fair, Sept. 23 to 28, inclusive, at Springfield. We all know that the apiarian industry has heretofore been rather poorly recognized at our State Fairs—largely, perhaps, because it has been poorly represented. But the Board of Agriculture has this year offered a magnificent schedule of premiums (see page 172). Now it behooves us to respond to their advances by making a magnificent exhibit. It is only by doing so that we may hope for continued consideration at their hands. The better display we make the higher our standing will be. Standing, you know, counts for a great deal. So far as the Fair is concerned, it means not only a good premium list, but also place and space for our show. The bee-keepers' exhibit is very apt to be crowded back into some dark, inaccessible corner. But now that the Fair is permanently located, new buildings are going up, and we should do our best to merit a good, eligible location. This we can do if we are there in force, for we can combine more of beauty and novelty in a given space than almost any other class of exhibits.

It may be hard this year to do the matter justice, since the honey crop in this State seems to be so general a failure. If any one has honey from any source fit to show, bring it on. Also best wax, bees, queens, implements, etc. No premiums are offered on implements, but space will be allowed to exhibit, and every little helps, you know. If you have invented any new devices—good, bad or indifferent—we want to see them any way.

Write to W. C. Garrard, Secretary of the Board of Agriculture, Springfield, Ill., for a premium list. Send in your application for entries early, so that they will know you are coming.

Mechanicsburg, Ill.

[It has been requested that "the code of rules and standards for grading apiarian exhibits at Fairs," as adopted by the Illinois State Bee-Keepers' Association, be published for the benefit of all interested. As they may also aid judges in other States, I comply with the request, and give them as they appear in the "Second Annual Report," issued by the Illinois Association:—EDITOR.]

COMB HONEY.

RULE 1. Comb honey should be marked on a scale of 100, as follows:

Quantity	40
Quality	40
Style of display	20

RULE 2. Points of quality should be:

Variety	5
Clearness of capping	10
Completeness of capping	5
Completeness of filling	5
Straightness of comb	5
Uniformity	5
Style of section	5

REMARKS, 1. By variety, is meant different kinds, with regard to the sources from which the honey is gathered, which adds much interest to an exhibit.

2. By clearness of capping, is meant freedom from travel-stain and a water-soaked appearance. This point is marked a little high because it is a most important one. There is no better test of the quality of comb honey than the appearance

of the cappings. If honey is taken off at the proper time and cared for as it should be, so as to preserve its original clear color, body and flavor will take care of themselves, for excellence in the last two points always accompanies excellence in the first. Clover and basswood honey should be white; heart's-ease, a dull white tinged with yellow; and Spanish-needle, a bright yellow.

3. By uniformity, is meant closeness of resemblance in the sections composing the exhibit.

4. By style, is meant neatness of the sections, freedom from propolis, etc. Under this head may also be considered size of the section. The 4¼x4¼ being the standard, should take the preference over all others, and 1⅞ to 2 inch in width over narrow ones.

5. Honey so arranged as to show every section should score the highest in style of display, and everything that may add to the tastiness and attractiveness of an exhibit should be considered.

EXTRACTED HONEY.

RULE 1. Extracted honey should be marked on a scale of 100, as follows:

Quantity	40
Quality	45
Style of display	15

RULE 2. The points of quality should be:

Variety	10
Clearness of color	5
Body	5
Flavor	5
Style of package	10
Variety of package	5
Finish	5

REMARKS, 1. Light clover honey pouring out of a vessel is a very light straw color; Spanish-needle, a golden hue; and dark clover honey, a dull amber.

2. Style of package is rated a little high, not only because in that consists the principal beauty of an exhibit of extracted honey, but also because it involves the best package for marketing. We want to show honey in the best shape for the retail trade, and that in this case means the most attractive style for exhibition. Glass packages should be given the preference over tin; flint glass over green; and smaller vessels over larger, provided the latter run over one or two pounds.

3. By variety of package, is meant chiefly different sizes; but small pails for retailing, and in addition, cans or kegs (not too large) for wholesaling, may be considered. In the former case, pails painted in assorted colors, and lettered "Pure Honey," should be given the preference.

4. By finish, is meant capping, labeling, etc.

5. Less depends upon the manner of arranging an exhibit of extracted than of comb honey, and for that reason, as well as to give a higher number of points to style of package, a smaller scale is allowed for style of display.

SAMPLES OF COMB AND EXTRACTED HONEY.

RULE 1. Single cases of comb honey, entered as such for separate premiums, should be judged by substantially the same rules as those given for a display of comb honey, and same of extracted by those governing displays of extracted honey.

RULE 2. Samples of comb or extracted honey as above may be considered as part of the general display in their respective departments.

GRANULATED HONEY.

RULE 1. Candied or granulated honey should be judged by the rules for extracted honey, except as below.

RULE 2. The points of quality should be:

Variety	10
Fineness of grain	5
Color	5
Flavor	5
Style of package	10
Variety of package	5
Finish	5

RULE 3. An exhibit of granulated honey may be entered or considered as part of a display of extracted honey.

NUCLEI OF BEES.

RULE. Bees in observation hives should be marked on a scale of 100, as follows:

Color and markings	30
Size of bees	30
Brood	10
Queen	10
Quietness	5
Style of comb	5
Style of hive	10

REMARKS, 1. Bees should be exhibited only in the form of single-frame nuclei, in hives or cages with glass sides.

2. Italian bees should show three or more bands ranging from leather-color to golden or light yellow.

3. The markings of other races should be those claimed for those races in their purity.

4. A nucleus from which the queen is omitted should score zero on that point.

5. The largest quantity of brood in all stages, or nearest to that, should score the highest in that respect.

6. The straightest, smoothest and most complete comb, with the most honey consistent with the most brood, should score the highest in that respect.

7. The hive which is neatest and best made, and shows the bees, etc., to the best advantage, should score the highest.

QUEEN-BEES.

RULE. Queen-bees in cages should be marked on a scale of 100, as follows:

Quantity	40
Quality and variety	40
Style of caging and display	20

REMARKS, 1. The best in quality consistent with variety should score the highest. A preponderance of Italian queens should overweigh a preponderance of black ones, or perhaps of any other race or strain; but sample queens of any or all varieties should be duly considered. Under the head of quality should also be considered the attendant bees. There should be about a dozen with each queen.

2. Neatness and finish of cages should receive due consideration, but the principal points in style are to make and arrange the cages so as to show the inmates to the best advantage.

BEESWAX.

RULE. Beeswax should be marked on a scale of 100, as follows:

Quantity	40
Quality	40
Style of display	20

REMARKS, 1. Pale, clear, yellow specimens should score the highest, and the darker grades should come next in order.

2. By style, is meant chiefly the forms in which the wax is molded and put up for exhibition. Thin cakes or small pieces are more desirable in the retail trade than larger ones. Some attention may be given to novelty and variety.

APIARIAN IMPLEMENTS AND SUPPLIES.

RULE. An exhibit of minor apiarian devices, etc., should consist of such as the following, with the accompanying scale of points for each:

Smoker	10	Honey-knife	10
Foundation fastener	10	Bee-escape and board	10
Veil	10	Swarm'g or hiving device	10
Feeder, large	10	Feeder, small	5
Queen-cage	5	Queen and drone trap	5
Queen-cell protector	5	Foundation roller	5
Wire embedder	5	Sample of sections	5
Brood foundation	5	Surplus foundation	5
Cage for shipping bees	5	Wired frame with fdn	5
		Wax-extractor	10

REMARKS, 1. The following may be added if desired, and they are not otherwise provided for:

Honey-extractor	30
Hive and furniture	20
Super and furniture	10
Shipping-case	5
Honey-board	5

2. When there are a variety of articles of any one kind, each specimen should be scored according to merit.

3. Some attention should be paid to style, both of individual articles and the display; but the principal points to be considered are utility and value.

GENERAL RULE FOR SCORING.

In all departments, and under each several head, the best or leading specimen or exhibit should be taken as a basis and scored the highest allowed such specimen or exhibit, and all others be marked in proportion.

REMARKS: Specimens of equal grade should be scored equally. It is not likely that any two exhibits will rank equally on all points, or in the aggregate.

Canadian Beedom.

Brittle Sections.

Mr. Hutchinson, in the July Review, says that sections, from being kept in a dry place, become so brittle that many of them break in folding. He adds that the best remedy is to put them in a damp cellar a few days before folding them, or if there is not time for this, the usual practice is to wet the grooves. The brittleness of many sections is a great annoyance, and a serious objection to the one-piece section, but I do not think this fault is always the result of their being kept in a dry place. There is a great difference in timber, some being much tougher than others. I do not mean that some kinds of timber are tougher than some other kinds, but that there is a difference in the quality of toughness between specimens of the same kind of wood. If I can get a tough, well-finished, one-piece section, I prefer it, but it is a vexation of spirit to get hold of a lot of sections made of brash, brittle timber, which, even when abundantly soaked, is constantly breaking during the folding process.

Some Canadian bee-keepers have claimed that our basswood is better than that across the lines. Loth as I am to do so, I must own that I have not found it as good, for sections, either in the quality of toughness or in smoothness of polish, or, I am forced to add, in whiteness of color. I would like to know whether, as in the case of white ash, the second-growth basswood is tougher than the first? Does anybody know? Also, are white poplar sections tougher and less liable to break than basswood? Or is poplar always made in four-piece sections? I must frankly confess to great ignorance in regard to white poplar sections, and I am inclined to think they are not much used in Canada, without it be in the Province of Quebec, in which, from being so near Vermont, it is very likely the noted Bristol sections may be used to some extent.

Spring Packing of Bees.

In the spring of 1894, Mr. R. L. Taylor, Michigan's Experimenter, made an extensive experiment in the packing of bees during the spring months with a view of determining whether any benefit was to be derived from such protection, or, to put it in another way, whether the warmth retained by the packing more than compensated for the sun-heat shut out by it. The result scored one against spring packing. To make assurance doubly sure, the experiment was repeated with greater exactitude last spring. Slight advantage was shown in some directions, but, on the whole, Mr. Taylor considers that spring sunshine does more good than spring packing. Of course these experiments were made with bees that had been wintered in the cellar.

Here in Canada I do not know of any bee-keeper who has made similar experiments. Those who winter in the cellar put their bees out-doors in the early days of April. Spring dwindling used to be occasionally complained of, but I think it was usually in regard to weak colonies. Strong colonies did not seem to be liable to this trouble. So the practical lesson was to keep all colonies strong.

Bee-keepers in this country who pack their bees for wintering out-of-doors are in the habit of delaying the removal of the packing material until settled warm weather. Possibly it may be the case that by delaying so long they lose somewhat of the advantage conferred by sun-heat. We need some experiments in that direction. I know at least one Canadian bee-keeper who keeps on his packing-cases all the year round, removing the packing material in early spring. He thinks the sun-heat during the day stores up considerable warmth in the space between the outer case and the inner hive; also that it lessens the influence of cold winds, while in the heat of summer the outer case keeps the whole hive in the shade. Ventilation in the hot days and nights of summer is provided by raising the cover of the outer case, or by large air-holes, that are closed in winter.

The shading of the entire hive by the outer case being kept on all summer is a point worth considering. When only shade-boards are used, the sun is apt to beat on certain portions of the hive at times, and the shade-board is liable to be displaced, unless it is sufficiently weighted down by stones or other heavy objects to prevent the wind disturbing it.

This whole subject of protection at all seasons of the year in the case of colonies in hives that are kept on the same stands both summer and winter, would seem to furnish scope for considerable investigation, experiment and discussion.

One Good Yield in Ontario.

I see very poor reports of the honey crop. Canadian Beedom gives a very poor report, indeed—no fruit-bloom, no clover, no basswood, and poor show for a fall flow. Now, I live in Ontario, near Cobourg, which is somewhere in Canadian beedom, I suppose, and I can come forth holding up my hand with 700 sections of white honey, and most of it from white clover. This, with about 50 pounds of extracted, from eight colonies, spring count, is a very good yield. Then I expect a good fall flow yet, from buckwheat and fall flowers. Basswood promised a good crop, but the weather was so dry that it gave scarcely anything.

A neighbor not more than four miles from my apiary, has been experiencing some of the "summer losses," mentioned on page 459, and also "winter losses." Last fall he put 43 colonies into winter quarters, bringing out only 10; some of those swarmed, and since then they have all died—swarms and all. I guess he thinks this pretty hard luck. Last summer he thought he knew it all, was making quite a science of it, but now he thinks bees are very strange insects—just when you think you have them, you haven't them.

Harwood, Ont., July 30. GEO. MCCULLOCH.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

A Question on Transferring.

Just four weeks ago to-day I purchased two colonies of bees at $2.25 each. I took 25 pounds of honey from one of them, and a 7-pound box from the other. I brought one home, took off the 7-pound box, and put another one on. I left it on two weeks, and as they did not seem to be doing anything in it, I transferred them into a hive, of the standard Langstroth frame. I took brood-comb to the amount of three frames, and filled out with frames with starters. Now as these brood-combs are very unsightly, uneven, etc., they are building them fast to each other, and as I want to increase by dividing next summer, I thought I would ask for some advice. Can I take 10 drawn-out combs, put them into a hive, remove the old hive, place the one filled with empty comb in its place, and

take the frames with brood, bees and honey in the second story of the hive? Will the queen go down in the lower frames all right? Also, could I do the same with the other hive that I have not transferred? The bottom-board is loose, and it will go inside of the Langstroth hive. W. H.

Huntington, Pa., July 29.

ANSWER.—The queen would be likely to go down and lay in the lower story when the upper story is so crowded with brood and honey that she no longer has room to lay there. It is doubtful, however, whether that will happen this year. Still, if you have a heavy fall flow it might be. At first when she goes down, there will be brood in both stories, and that will continue so until the upper story is filled with honey.

Hoarhound and Nervine.

1. Please tell me if bees gather good honey from hoarhound. I have a large patch of it, and the bees work on it as if it was linden.

2. Also nervine—a tall flower or weed that has a stem on top of the stalk, with blue flowers on it also. What quality of honey does it produce, as the bees are swarming on it?

Bees are doing extra well here in this locality this year.

Moscow Mills, Mo., July 18. J. W. K.

ANSWERS.—1. It rather seems to me that I have read of its being bitter. But if so, it ought to be good for medicinal purposes.

2. I don't know about this.

What Were the Bees Doing?

I was watching my bees July 5, and saw at one hive two bees come out of the entrance. They were to all appearance fighting; one seemed to be trying to get the other away from the hive. At last they flew into the air and separated, and both flew back to the hive. I then watched the rest of my hives, and they were doing the same thing. It does not look like robbing, and, besides, there is a good honey-flow. What do you think they were doing? H. C. T.

ANSWER.—I could tell better if I could see the bees, perhaps. I've sometimes seen bees do something of that kind when I could see no reason for it. I suppose there may have been something objectionable about the bees that were being dragged out, or they were in some way imperfect. When bees work on milkweed they get their feet stuck up with the pollen-masses, and the other bees may try to drag them out.

Closed-End Frames—Frames Crosswise of the Entrance—Bottom-Boards.

I want to use a 10-frame hive (closed-end frame) for extracted honey, spaced 1⅜ inches, with top and bottom bars 1 1/16 inches wide, all made of ⅞ inch stuff. A saw-kerf is cut in one edge of each end-bar—see Mr. Minnick's frame on page 249 of the American Bee Journal. In my frame the zinc runs from top to bottom of the end-bar, and the other edge of the end-bar is not notched, but is straight and full to the bottom. This is not my "invention"—I am simply borrowing Mr. Minnick's idea and applying it to the closed-end-bar frame. The zinc projects ¼ inch from the edge of the end-bar. The frames rest on strips of sheet-iron nailed to the bottom edge of the end-boards of the hive, with a ⅜-inch bee-space above the frames. I have only one hive made, and won't make any more till I am assured that the plan proposed herein might work well.

Now Mr. Craycraft says, on page 789, that his frames are crosswise the entrance of the hive, hives only 8 inches apart, and he manipulates from the back of the hive. I like this very well, but if the hive be raised an inch or two at the back, the combs will be out of plumb, likewise the supers.

Mr. T. I. Dugdale says, on page 247, that his hive is made with bottom-board ⅜ of an inch below the frames at the back, and 1½ inches below the frames at the front. Now by using a thick cleat under the bottom-board at the back, and a thinner cleat under the front part of the bottom-board, the hive and combs will be plumb, and the bottom-board will have a downward slant toward the entrance, and this is what I would like, too. Then I would have them in good shape for wintering on the summer stands, by packing in between and around with chaff; with a narrow roof for shade in summer, and well boarded up at the back for winter. But Dr. Miller says, on page 11, that the distance below frames should be ⅜ of an inch. I have been watching the Bee Journal for comments on Mr. Dugdale's bottom-board, but seeing none, I must now appeal to you, heping you will be so kind as to answer the following questions:

1. Did you ever use closed-end frames as here described?

2. Do you think there will be less jarring and snapping in taking these frames out, than if they were all wood?

3. What objection is there to having frames crosswise of the entrance?

4. Will the bees build ladders or hummocks on the Dugdale bottom-board?

I would like to see something on Question 4 from Mr. Dugdale, whose valuable articles in the American Bee Journal I have read with so much pleasure and instruction; and I would like, also, if Mr. Craycraft would let us know if his hive bottom-boards are level or otherwise. A. A. D.

ANSWERS.—1. I've used closed-end frames, but not made in the way you describe.

2. Yes, and it will take less prying to get them apart. They will also have the advantage that after a year's use the frames will take about half an inch less room than if the end-bars were all wood.

3. The objection you have already noticed, that they cannot slant from rear to front, is one. Another is, that bees cannot so directly reach any frame in the hive.

4. I have had many hives with the bottom-bars ⅝ of an inch above the bottom-board, and hummocks were always plenty. I should expect many on the Dugdale bottom-board, but possibly none toward the front end where the bees might not think it worth while to try to build to such a height. But I don't know that there's anything so very bad about such hummocks. Messrs. Dugdale and Craycraft will please note the questions asked of them.

Making Wax—Feeding Pollen—Dragging Out Young Bees.

1. Can wax be made of combs filled with brood and pollen? If so, what is the method?

2. Can pollen in old combs be fed to bees in early spring?

3. I transferred a colony, drumming the bees into a box, and shaking them at the entrance of a hive partially filled with foundation. I failed to find the queen. After tearing up the old hive, I fastened the brood from it in a frame, and placed it in the new hive. I find that the bees are dragging the young bees out as they hatch. What is the cause? I fed some syrup after transferring. F. C. E.

Cany Hollow, Va., July 17.

ANSWERS.—1. Yes. By the sun wax-extractor is a good plan, but by any ordinary means you'll not get a great deal of wax, for the cocoons in the old combs act like sponges to soak up the wax. Perhaps you better leave them till cold weather, so they will be brittle, unless you can make them cold enough now. Then break them up fine, and soak them in water for two or three days. That soaks the cocoons full of water so they cannot hold any wax, and then you can get the wax out by almost any method. You will find pretty full instructions on page 490.

2. Yes, if it has been well kept, and is not too sour or moldy.

3. Hard to tell without fuller information. Possibly worms have been troubling, and the young bees are imperfect. Possibly some injury was done to the brood in transferring, making the young bees imperfect, and a bee that is not perfect is likely to be hustled out without ceremony.

A Cannon-Load of Questions on Swarming and Other Matters.

FRIEND MILLER:—I am going to turn a whole cannon-load of questions on to you, and I don't want yon to fire back at me a lot of "don't knows," for I *want* to know.

1. On June 17, 1895, I had three second swarms and one prime swarm to cluster together. I hived the most of them in with a weak colony (which for convenience we will call No. 1), and the rest in No. 2. The next morning I found two dead queens in front of No. 1, and at 10 o'clock another, and inside was a queen running around, piping just the same as they do before a second swarm, only there was no queen in a cell to answer. Do the bees kill the extra queens, or does one of the queens kill the others, and she was piping while she was looking for more? I have united swarms like that lots of times, and never heard any piping afterward. A neighbor

of mine says that "he has found dead queens in front of his hives with several stings sticking in them, as if the bees stung them to death;" but I have never found any stings in them; when the bees ball a queen, they seem to do more biting than stinging. In the above case, if the bees killed the surplus queens, what was the other piping for?

2. I had a colony last spring that did not work with the same energy as the rest, and dwindled when the others were gaining. One day I took out the frames and found here and there a drone sealed among the worker-brood in the worker-comb, so I concluded the queen was failing, so one day when I expected a second swarm I destroyed the old queen, intending to unite the swarm with the young queen with the old colony, but my second swarm came out and clustered with a prime swarm, so I concluded to give them a sealed queen-cell. On June 22 I had a colony swarm, and June 23 I looked into the old colony, and they had six sealed queen-cells. On June 24 I took a frame with two of the cells on it, changed it for a frame out of the colony that I had previously destroyed the queen—this was four days after—and they had several cells started, but when I gave them the two sealed queen-cells they stopped work on their own. On the morning of June 28 I found a dead queen in front of the hive, fully grown except the wings, and just beginning to turn brown, thinking one queen had emerged and destroyed the other, as it was six days after the old colony had swarmed that I took the cells from; but on taking out the frame I found the other cell all right—not open. On July 2—nine days after I first saw the cell sealed—I looked again, and it was still sealed. On July 4—11 days after it was sealed—and it was the same. I closed the hive again, and just then a prime swarm issued from another hive. Thinking the above cell had a dead queen in it, I went back to take it out, intending to unite the swarm with them, and the queen had emerged; that was about 10 minutes after I looked before. I thought the orthodox rule was, for a queen to emerge in 8 or 9 days after the cell is sealed. What was the reason it took this queen 11 days? Did the bees keep her in beyond her time to emerge, and by looking at the frame I disturbed them so that she got out?

3. I thought when a colony was queenless, they wanted to get a queen as soon as they could; what made them keep the other cell four days before they destroyed it?

4. Or was the old colony that I took the cells from, anxious to swarm, but the "old lady" would not leave until they had queen-cells sealed, and they sealed them sooner than usual?

5. On June 17 No. 4 swarmed the second time, and before they clustered No. 8—a colony that stood next to No. 4—sent out a prime swarm. After I had them hived, I examined No. 8, and they had a number of queen-cells started; but the larvæ in them did not seem more than one or two days old. Did the noise made by No. 4 swarming cause No. 8 to swarm before they had any cells sealed? or do you think it is a habit of theirs? They did about the same last year. This year they began piping 12 days after the first issued, and swarmed two days later; and last year they began piping 14 days after the first swarm issued, and swarmed three days later, or 17 days after the first swarm issued.

6. What do you think Henry Alley would say to the above, as he says the second swarm *invariably* issues nine days after the first, unless the weather prevents?

7. Most specialists say that "the surplus cases should be put on when the bees begin to whiten the combs along the top-bars." When should they be put on when the bees do not whiten the combs at all, and keep on swarming, as mine did this year?

Fruit-bloom and dandelions were very plentiful this spring, and the bees bred very fast until May 12, when we had a freeze and a week of cold weather. Some hives had a great deal less honey when they swarmed than they had in the spring when first taken out of the cellar. J. M. S.

Chanhassen, Minn., July 15.

ANSWERS.—1. There is nothing so very unusual in the case. More than one queen was present, and there was more than one swarm, and it is often the case that a number of virgin queens issue with one swarm. All but one of the queens would be destroyed, the queens fighting it out themselves, but there are cases in which the workers do the killing. I don't know for certain what queens always pipe for, but I think your piping queen "had blood in her eye," and if at the time she was piping she had met another queen, there would have been a fight to the death. I've known an old queen to pipe with no other queen near, and it seemed a little as if she were piping from alarm.

2. I don't know. There have been many cases of delay, from whatever cause, and I think the bees sometimes seal a cell earlier than usual. At least I've torn open queen-cells which had in them quite small larvæ. In that case the queen might be sealed longer than usual, and still not be longer from the egg than usual.

3. Bees have fixed rules about everything, but they seem to take lots of comfort in breaking rules. A queenless colony is sometimes very anxious for a queen, and sometimes it seems anxious to kill every queen offered to it. Indeed, the latter seems rather the rule, else why should there be so much trouble about introducing queens? It is quite common for bees with a virgin queen to allow cells to remain undisturbed until quite mature.

4. As I have already intimated, the sealing might possibly have been done before the usual time.

Let me suggest another possibility. Sometimes a queen issues from a cell, and the cap falls back to its place, making it look as if the queen were still in the cell, when she may have been out several days. So it is just possible that on June 28, when you found that dead queen thrown out, that there was a young queen at large in the hive.

5. I think it possible that the noise and excitement of their neighbor swarming may have caused them to swarm sooner than they otherwise would have done.

6. I don't know. He might say the weather prevented.

7. If the little fools will swarm before the surplus harvest begins, I don't know that putting on supers would make much difference.

Now load up your cannon again.

Getting Bees into the Sections.

I have one colony of bees that seems determined not to go up into the super. They have the outside brood-frames full of honey, and all capped over, and all the rest the same excepting the lower half of each frame for about half the length; the upper half and down each end is honey all capped, and it seems to me that it is not giving the queen room enough to rear what brood they ought to be rearing. What shall I do?

AMATEUR.

ANSWER.—Put in the super a section containing comb, either empty, or, perhaps better still, with brood in it. Better put it near the center of the super. Uncap some of the honey in the brood-frames, where you think the queen ought to lay.

Possibly the Bees Were Poisoned.

Referring to my account of a pecular bee-disease (?) entitled, "What Ails the Bees?" (page 394), I will say further, that in three days from the time they first commenced dying off, there were but a very few left, not enough to cover two frames. Then I thought I would put the bees into a clean hive, and give them a frame of old honey from last year, taking out most of the honey they then had. I did so, and by the next morning there were no bees to be seen crawling out of the hive, and dying as before.

A friend who lives but a few miles from me, says he lost several colonies in about the same way. His strongest colonies were affected the worst, and some nuclei which he had were not affected at all. He thinks the bees gathered some honey that is poisonous. Does not this seem like a very reasonable solution of the problem, considering the facts in the case? But what can it be they have gathered? Is it possible that it is any secretion such as honey-dew? Wasn't this the wrong time of year for any kind of honey-dew? But supposing it was honey-dew, has it ever been known to affect bees in this way before?

For several days prior to this, the bees had been gathering a little honey, but from what source, I know not, and nothing before that but a little from fruit-bloom.

Omaha, Nebr. J. W. P.

ANSWER.—I hardly think it would be honey-dew, although honey-dew has pretty much all seasons for its own, I believe. Your neighbor's bees dying at the same time, and in the same way, points to something like poison. Possibly some one sprayed poison.

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

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Editorial Budget.

Father Langstroth has most agreeably surprised me with a letter in his own handwriting, dated Aug. 1, 1895. He says:

"I have about recovered from the last attack of my 'head trouble.' It has lasted nearly three years.....I hope to send something of interest to the American Bee Journal before long."

I am sure all will rejoice with Father L., that he is once more himself, and can enjoy life eveo at the advanced age of 85 years. Also, it will be a pleasure to again read something from his pen in the American Bee Journal, and all will look forward to it with much interest.

There is just the faintest possibility of Father Langstroth being at the Toronto convention next month. Next week I *hope* to be able to announce definitely that he will be there.

The Palmer House, located at the corner of King and York streets, Toronto, will be the headquarters of the North American convention Sept. 4, 5 and 6. Mr. J. C. Palmer, the proprietor, writes me that he has made arrangements to accommodate 200 delegates. So you see there will be ample room for all. Where members "double up"—two in a bed—only $1.50 a day will be charged; $1.75 if you prefer to "bunk" alone.

Just across the street from the Palmer, is the Kensington, another hotel owned by Mr. Palmer. Here the rate is 50 cents and up for rooms, and meals are furnished on the European plan—pay for what you order.

It is my intention now to be at the Palmer House during the convention, all being well.

The North American at Toronto.—Although all the program for the meeting of the North American Bee-Keepers' Association at Toronto is not quite ready to announce, Secretary Hutchinson has sent me the following in regard to transportation and hotel arrangements for those attending the convention at Toronto, Sept. 4, 5, and 6:

The North American will hold its annual convention in the auditorium of the Normal School, at Toronto, Ont., Canada, on Sept. 4, 5, and 6, the first session being on the evening of the 4th.

The Trunk Line Association and the Central Traffic Association have both given reduced rates—a fare and one-third. Persons going will buy a ticket paying full fare going, and get a Certificate from their station agent. If a ticket Certificate cannot be obtained because your starting-point is a small place, then buy a ticket to the nearest large town where a Certificate may be obtained. It might be well to inquire of the agent a few days beforehand, and thus learn if he has any Certificates, and the point where one can be obtained if he has none.

If 100 persons are present who have come on some legitimate form of railroad transportation, all who have Certificates, and have paid as much as 75 cents fare going, will be sold tickets for the return trip at one-third fare. In Canada and Michigan, and in other States, perhaps (but of this I do not know), round trip ticket can be bought for but a single fare. This, of course, will be better than the certificate plan. Perhaps many living a short distance beyond where excursion rates are given, will find it cheaper to buy a regular ticket to the nearest point where excursion rates prevail, but those coming long distances will probably find the Certificate plan the best. Each one must look up these matters in advance and decide for himself which is the best for him.

The Trunk Line Association covers the roads from Niagara Falls, Buffalo, Salamanac, N. Y., Pittsburg, Pa., Bellaire, Ohio, Weeling, Parkersburg, and Charleston, W. Va., and points east thereof *except* New England. I hope to get reductions from New England. The Central Traffic Association covers the territory west of Buffalo and Pittsburg to Chicago, and St. Louis on the west, and the Ohio river on the south.

Tickets must be bought not earlier than three days previous to the meeting, and return tickets bought not later than three days after the meeting.

The headquarters at Toronto will probably be at the Palmer House, corner of King and York streets. This is $2.00 a day house, but if members will double up, two in a bed, the price will be only $1.50 a day. If separate beds are wanted, it will be $1.75. Remember this is during the Industrial Fair, when no reductions at all ought to be expected. The street cars pass the hotel, and they can be taken within a block of the Normal School, where the convention is to be held.

While the program is not yet complete, the following can be announced:

Thomas G. Newman, Chicago, Ills.—The Bee-Keepers' Union: Its Past, Present, and Future.

Dr. C. C. Miller, Marengo, Ill.—Amalgamation of the North American Bee-Keepers' Association and the Bee-Keepers' Union.

Hon. John Dryden, Minister of Agriculture, Toronto, Canada—Address of Welcome, Etc.

A short address by Jas. Mills, M.A., L.L.D., President of the Ontario Agricultural College, Guelph, Canada.

S. T. Pettit, Belmont, Ont.—Introducing Queens.

Ernest R. Root, Medina, Ohio—Bee-Paralysis: What We Know and Should Do About It.

Allen Pringle, Selby, Ont.—Mistakes of Bee-Papers and Bee-Journals.

H. R. Boardman, East Townsend, Ohio—How to Feed Bees Profitably.

Hon. R. L. Taylor, Lapeer, Mich.—How Bee-Keepers Might Receive More Benefit from the Experiment Stations.

F. A. Gemmill, Stratford, Ont.—Who Shall Winter Bees Out-of-Doors; Who in the Cellar?

Dr. J. P. H. Brown, Augusta, Ga.—What is Indicated by Color in Italian Bees?

James Heddon, Dowagiac, Mich.—The Proper Size of a Brood-Nest, and How It Shall be Decided.

B. Taylor, Forestville, Minn.—The Surest and Best Way of Producing a Crop of Comb Honey.

G. M. Doolittle, Borodino, N. Y.—Some Things of Interest to Bee-Keepers.

R. McKnight, Owen Sound, Ont.—Legislation for Bee-Keepers.

Flint, Mich. W. Z. HUTCHINSON, *Sec.*

It seems to me that there will not be any question about 100 bee-keepers with Certificates being at the Toronto convention—the number necessary to secure the ⅓ rate of fare returning. The Central Traffic Association covers all the main lines of railroad in southwestern Ontario (Canada), and the States of Ohio, Michigan, Indiana and Illinois. Surely there ought to be 100 present from that region alone, not counting those from east and south of Ohio, and west of Illinois.

Please *be sure* to get a Certificate when purchasing your ticket *going* to Toronto, then at the meeting have Secretary Hutchinson sign it so that afterward, upon presenting it to

the agent at Toronto, you will be entitled to the ⅓ fare returning home. Upon a single bee-keeper may depend whether or not 100 Certificates are shown at the convention, so you will readily see the importance of getting a Certificate when purchasing your ticket for Toronto.

No Editor or Publisher of a bee-paper should think of wanting to be the Secretary-Treasurer of the amalgamated society, if such should result from the North American and Bee-Keepers' Union. At least this editor wouldn't entertain the thought for a moment, and would strongly oppose any other, should he attempt to win the office. No, it would not be fair. It would give the favored editor an advantage over all others, which would not result in the best interest of the society, I fear. Editor Root says this in last Gleanings, on this point:

It has been whispered to me that some editor was after the General Managership of the Union, or such organization as might perhaps be perfected in the future by amalgamation or otherwise. So far as Gleanings is concerned, neither of its editors would accept the office under any consideration. I have already heard from the editors of three or four other leading bee-papers, and find that their position is ours exactly.

Whoever "whispered" that time would better hereafter speak even lower than a "whisper." Surely, no self-respecting editor would be "after the General Managership."

Wifeless—Not Homeless.—Bro. Leahy, in the August Progressive, had this alarming notice:

"Alas! poor Yorick! The sad news comes as we go to press. Dr. Miller writes: 'Friend York has no home now.'"

Lest some might think that my pleasant home is all broken up, and that I am a candidate for all sorts of sympathy, I had better say that it all came about by Mrs. York going to stay with her mother-in-law in Ohio for a month or so, in order to rest up and endeavor to regain her former excellent health. That's all. In a week or so now I'll not feel so lonesome. But I hereby give notice that Dr. Miller had better stop telling such whoppers about me! And it will be "Alas! poor Leahy!" if he sticks his editorial pencil through me again in that kind of a style!

North American Bee-Keepers' Union.—How's that for a name for the society formed by uniting the North American Bee-Keepers' Association and the National Bee-Keepers' Union? This is a day and age of "Unions," and I believe that under the name suggested, thousands of members could be secured if proper inducements are offered.

In Gleanings for Aug. 1, Editor Root comes out in a strong editorial favoring the amalgamation of the two existing national societies. It ought to be done, and very soon.

Phrenology.—The annual session of the American Institute of Phrenology will begin on Tuesday, Sept. 3, 1895. Those who expect to attend, or who are in any way interested, should write at once for particulars to the publishers of the Phrenological Journal, 27 East 21st Street, New York. From present indications this will be the most successful session of the Institute ever held.

Honey as Food and Medicine.—A new and revised edition of this 32-page pamphlet is now issued. It has 5 blank pages on which to write or paste recipes taken from other sources. It is just what its name indicates, and should be liberally distributed among the people everywhere to create a demand for honey. It contains a number of recipes on the use of honey as food and as medicine, besides much other interesting and valuable information. Prices, postpaid, are: Single copy, 5 cts.; 10 copies 35 cts.; 50 for $1.50; 100 for $2.50. Better give them a trial. Send all orders to the Bee Journal office.

Among the Bee-Papers

Gleaned by Dr. Miller.

TO DETECT ADULTERATION OF BEESWAX.

From Hainant's Pragies Apicole is taken the following: To test wax for adulteration, heat to boiling one gramme with ten grammes of water and three grammes of carbonate of soda; let it cool, and if pure, the wax will float and the water remain uncolored; if adulterated, an emulsion more or less liquid is formed. Five per cent. adulteration can be detected in this way.—F. L. Thompson, in Review.

SPEAKING KIND WORDS.

Strange, isn't it, that some people don't like to hear others well spoken of? Surely there can be no harm come from giving one another words of encouragement. If we appreciate the efforts of a brother bee-keeper, or admire his writings, what harm can it do to let him know it? Few men in this world have too many kind words spoken of them, but many men have too much said that is discrediting to them. The way of the world is to say nothing good of a man while he is living, but after he is dead, no matter how wicked and sinful he has been, someone will manage to find something good of him. Let it not be so with bee-keepers.—S. E. Miller, in Progressive.

GETTING BEES OFF EXTRACTING-COMBS.

S. T. Pettit gives his plan in Canadian Bee Journal, as follows:

"This is the way I do it now: First give a couple of smart whiffs of smoke in the entrance, then blow smoke smartly under the quilt and the bees will rush downwards, then remove the quilt or cloth and for a moment rush the bees down with smoke. Now is your opportunity; lift the combs out quickly and shake off what bees you can quickly, and lean the combs against the back part of the hive or any other convenient thing, or place them in a light box for the purpose. Now, keep on a hustle and as soon as the last frame is out, drop in and adjust your empty combs and close up the hive. Now, see, all this must be done before the reaction or return of the bees sets in, and your bees are still in good humor, and their zeal for gathering honey is not decreased by the presence of those empty combs, and everything is lovely.

"The process of brushing the remaining bees from the combs will be found pleasant and easy, for by this time they feel lost and lonely, and they are in no mood for self-defense. I had rather remove the filled combs and replace them with empty ones than adjust and remove a bee-escape. And then, I fancy that the bees being crowded in the brood-chamber and the consequent excitement caused by the bee-escape would work up swarming-fever.

"I go right on with this work in the robbing season. I place the robber-cloth over the comb box, and just when commencing operations I fill said box with smoke; this keeps the robbers at bay. At such seasons I have an assistant to keep the air over and about the hive pretty full of smoke."

SIZE OF HIVES.

In Gleanings, J. F. McIntyre reports that he and R. A. Holley have been experimenting with hives containing frames Langstroth length, some of them 7 inches deep and others 12 inches deep. They are much pleased with the deep frames, and very positive that they want no horizontally divisible brood-chambers. The editor adds in a foot note:

"Personally, I have never experimented with deep brood-chambers; but I have observed this: That we in our locality, only a few miles from H. R. Boardman, while following precisely the same method of wintering in-doors, we do not have the same success that he does with his deep hive. While we lose in-doors from 10 to 25 per cent., Mr. Boardman loses none. Perhaps the depth of brood-chamber may have something to do with it; but after all, take the reports as they generally run, there does not seem to be much difference in results, so far as wintering is concerned, between the Langstroth size of frame and a square one. But Friend McIntyre's argument is, if I understand him correctly, that more brood can be secured by using a deeper frame. Perhaps he is right. His experience, and also that of Mr. Holley, agrees almost exactly with tests that we have made here at the 'Home of the Honey-Bees;' namely, that bees do not breed as well in divided brood-chambers as in one in which there is no division."

F. A. Snell favors a cubical hive with the American frame, and C. W. Dayton wants one that makes a cube by adding a

half-story, the lower story containing 2,000 cubic inches. Joseph I. Earle advocates a hive measuring 12 inches each way, and that from such a hive he gets 200 pounds of extracted honey each year, the honey-flow lasting two and a half to three months.

DRUG TREATMENT OF FOUL BROOD.

Rev. W. F. Clarke in Gleanings says that in trying to cure foul-brood by the phenol treatment, he found a couple of wrinkles he thinks worth knowing, viz.:

"The first is, to feed the phenolated syrup at a time when there is absolutely no honey coming in. Take advantage of the period of complete cessation af nectar-yielding, when the bees are ravenous for food, and are like a hungry man who will not be particular to get quail-on-toast, and other epicurian dishes. The second wrinkle is to take care not to medicate the syrup too strongly with phenol. I overlooked in my first trials this pregnant sentence: '1 /500 dispatched the bacillus quickly when honey was coming, in and 1 750 when it was not.' I found that, even in a time of scarcity, the bees refused the 1 500 decoction, and I kept diluting the syrup until they took it freely."

The editor comments: "With regard to the phenol, I personally tried it diluted 500, 1,000, 750, and, in fact, all sorts of dilutions; and in nearly every case it would apparently check the disease, but not in a single case do I remember that it *cured* it entirely, *in the long run*; and when we were fussing with phenol, foul brood in the meanwhile got pretty well scattered over our yard."

SHAKING BEES OFF COMBS.

Doolittle thus describes his method in Gleanings: "I place the projecting ends of the frame on the ends of the two middle fingers of each hand, and then with a quick upward stroke throw the ends of the frame against the ball or thick part of the hand at the base of the thumb. As the frame strikes the hand, let the hands give a sudden downward motion, which makes the shock still greater. As the frame strikes the fingers it is again thrown back against the hand, and so on till all or nearly all of the bees are off. The principle is, that the bee is on its guard all the while to keep from falling off, thus holding on tenaciously so as not to be easily shaken off by any motion which tends to throw it down. By a sudden stopping of the upward and a quick downward motion, the bees are thrown off their guard and dislodged from the comb in an upward direction."

The editor adds in a foot-note: "I sometimes practice your method; but more often I pick the frame up, grasping the projecting end of one end of the top-bar; and, doubling my fist, I strike the top-bar one sharp, quick blow at a point where there are no bees."

I like the Doolittle plan for heavy frames, and the editor's plans for frames not so heavy. For very light frames I like a plan still different. Hold the frame in the left hand by the end of the top-bar, and pound on the left hand with the right fist.

I find it a good plan to winter two to four queens in 4-frame nuclei, for queening any colonies that are found queenless in the spring. If not needed, they will generally make good colonies for June, by giving plenty of combs.

A WAY TO GET GOOD QUEENS.

An easy way to get them is to select your queen-rearing colonies in the early fall. Give them two stories of 8 or 10 frames each; build up very strong by stimulating brood-rearing and giving eggs from your nuclei, if necessary. See that they have 40 to 50 pounds of stores for winter and spring. Feed again in the spring during unfavorable weather, to get them to swarm early. We ought to have our queens laying by April 20. Then, by giving each three or four frames of bees and brood, and filling up with drawn combs, or full sheets of foundation, with a favorable season they ought to give some surplus in June. By fall they should be about equal to the old colonies that did not swarm. In this way we get our increase at a very small expense to the honey crop; and by using large hives in most seasons we have but little trouble to prevent swarming when running for extracted honey.

BEES REARED IN LARGE HIVES.

Large hives—"double discounters," but small ones for manipulation. That is about where Mr. Davenport leaves us on page 391. True, he says bees, but were they not developed in large hives—boxes? He also says: "They lived longer, and a good deal longer than ordinary bees." That seems to be a very important point in favor of large hives. I am confident that the bees, and especially the queens, of a thoroughly developed colony, are more vigorous and longer-lived than those reared in most small hives.

Newtonville, Ala. W. W. GRAYLEE.

Good Report from Texas.

I started in the spring with 105 colonies of Italian and hybrid bees in poor condition, but having favorable weather I succeeded in building them up for the main honey-flow, which commenced the last of April, and continued until the last of May.

I increased to 128 colonies. I work my bees two, three and even four stories high, trying to keep them from swarming as much as possible, and only hiving such swarms as settle together while swarming, or such as I don't know from which hive they came. All other single swarms I put back where they came from.

I use the Langstroth-Simplicity frames, ten to the hive. I only work for extracted honey, using a two-frame Cowan reversible extractor. I extracted from my bees 11,000 pounds of first-class honey, very thick and nice, all put up in 60 pound cans.

My bees are in splendid condition now—plenty of stores—and are making more than a living. The hives are boiling over with bees. We nearly always have a honey-flow in the fall. R. W. SAUER.

Brackettville, Tex., July 17.

Bitter Honey in the South.

When the bees are at work on the yellow tops, bitter-weed, it is advisable to remove all sections or comb honey, intended to be taken, from the hive, as from this all the honey stored will be bitter. All bitter honey in the supers should be fed to the bees during fall and winter, and not left over to mix with the spring supply. Otherwise that will also be more or less bitter.

BITTER HONEY AS A TONIC.

There seems to be a greater freedom from diseases among bees in the South than with the North, and we must attribute it to the tonic and prophylaxis of the bitter element in the fall honey. It is also said to be an excellent cough remedy, perhaps from the same medical virtue found in the bitter principle of the hoarhound. There is nothing deleterious in the bitter honey, should any one be induced to use it, either as food or medicine.—R. H. WHITFIELD, in Southern Live-Stock Journal.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

Experience with Swarms—Good Queens, Etc.

Large swarms have given me some trouble this season, when I neglected to put on the surplus arrangement as soon as hived, or shortly after. Every one so hived swarmed out. In hot weather it is a safe rule to give ample room to begin with. As a further precaution, if thought necessary, put on a queen-trap. Don't depend entirely upon the proverbial frame of brood. It doesn't work every time.

The queen-trap is not reliable for hiving after-swarms when the prime swarm issues before any of the cells are completed, and the old hive is moved to a new stand. Some of the young queens get out.

A good-sized mirror, held so as to throw the reflection among the bees, will generally bring down absconders. This was given some time ago in the Bee Journal, but is, I think, worth repeating. It seems to work when the sun is shining. But what are we to do when the sun refuses to shine for us? Try cow-bells, I suppose.

That New Song—"Queenie Jeanette"—which is being sung everywhere, we can send you for 40 cents, postpaid, or club it with the American Bee Journal for one year—both for only $1.10. Or, send us one new subscriber for a year (with $1.00), and we will mail you a copy of the song free.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Bees and Pollen.—"If bees carry pollen from bloom to bloom of the orange and peach, as they do in many other kinds of fruit, why does not the seed produce trees bearing different varieties of fruit?"—MRS. HARRISON, on page 391.

Because in many cases the pollen of one variety is not potent on the other, but in some cases it is. A gentleman told the writer of a circumstance where a person planted ten apple seeds in pots in the house, the seeds all being taken from one apple. The trees produced from these ten seeds bore as many different varieties of fruit as there were trees.

The peaches produced from the seed would be nearly like the ones from which the seeds were taken, provided they were not grafted or budded fruit. In that case, of course, they would be like the fruit of the root upon which the graft was made. This, however, could not be absolutely true, if fertilized by pollen from a blossom of a different variety, as the female germ must be influenced more or less by the male germ with which it unites. The resulting fruit should be more or less modified by the combination of the two potent forces. Theoretically, at least, this should influence the seed somewhat; and, if there is any truth in the circumstance mentioned above, this is true practically. In fact, if I mistake not, there is a berry grown in California, called the "Logan Berry," which is the result of a cross between the blackberry and the raspberry.

Large Blue Flag.—Though this flower is of no special importance to the bee-keeper as a honey-plant, yet we think the readers of the Bee Journal will be interested in what Mrs. Starr Dana has to say about it in her book, "How to Know the Wild Flowers," which was reviewed in this department on page 495. I make the following extract:

"For the botanist the blue flag possesses special interest. It is a conspicuous example of a flower which has guarded itself against self-fertilization, and which is beautifully calculated to secure the opposite result. The position of the stamens is such that their pollen could not easily reach the stigmas of the same flower, for these are borne on the inner surface of the petal-like, overarching styles. There is no prospect here of any seed being set unless the pollen of another flower is secured. Now what are the chances in favor of this? They are many. In the first place, the blossom is unusually large and showy, from its size and shape alone almost certain to arrest the attention of the passing bee; next, the color is not only conspicuous, but it is also one which has been found to be particularly sought by these insects. When the bee reaches the flower he alights on the only convenient landing-place, one of the recurved sepals; following the deep purple veins which experience has taught him lead to the hidden nectar, he thrusts his head below the anther, brushing off its pollen, which he carries to another flower."

Mrs. Dana, like many others, does not seem to have found out that the worker-bee is a female, but we can excuse her for this since she has come to our aid in helping to demonstrate the importance of cross-fertilization.

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Bee-Keeper's Guide—see page 528.

General Items.

No Failure in Seven Years.

It is seldom we see anything in any of the bee-papers from our part of the country, so I will say we are just "rolling in the honey"—in the wheelbarrow. We have about 225 colonies, 70 of which we work for extracted honey. Burt, who is not yet quite 16 years old, does nearly all the outside work, and helps with the inside work, too. He folds and "starters" all the sections, does all the uncapping, and much of the extracting; helps take out and care for comb honey, and, in fact, is our main "beeman."

While Dr. Miller's bees are taking a rest, he had better come over and help us; but then we do not use T-tin supers.

This is our seventh summer here, and there has not been a single failure to produce a good crop. MRS. LUCY C. SLEASE.

Rosswell, New Mex., July 24.

Small Crop—Five-Banded Bees.

I have so small a crop of honey this year that I have no fear of its breaking the market if reported. When the season began we had a good outlook for a large crop of honey. The freezes in May killed the basswood buds, and was very damaging to the clovers of all kinds. The hot, dry weather rushed the season so fast that it closed July 6, and the result is one of the shortest crops of honey we ever get, when we get any.

In my 43 years' experience with bees, I never knew a season to close so early by 15 days. All my honey was off on July 15 this year, and the crop counted. While, as a rule, the bees are right in the midst of

GOLDEN ITALIAN

QUEENS by return mail from a breeder obtained of Doolittle, which he selected and tested out of 1000, for his own special use; he said this Queen is a better one than the

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the honey season at that date, in this locality, 3,000 pounds of comb honey is my crop from 163 colonies wintered. Spring losses left them at 116 the first of June, when clover began to blossom.

The 5-banders still hold the red card, and hold it strong for comb honey against all the races of bees that I have, and I have all the races in this country but the gray Carniolans. The greatest number of sections any one colony gave me was 80 1-pounds nicely filled, and some partly filled, and that was a 5-bander.

The next largest amount was 66 pounds, and a few partly filled, taken from a Punic colony. I have no bees nor queens to sell, so no one need apply for either.

I have had the 5-banded bees under my observation and care for four seasons, and have watched them closely in all their peculiarities, and have yet to find one single strong colony that proved itself a loafer. My hives are large, the old Quinby, 8 frames to the hive, size of frame 11⅛x19⅛ inches. All can see that I have a big hive, and the big 5-banders to winter in it.

IRA BARBER.

De Kalb Junction, N. Y., July 22.

Terribly Dry Weather.

We commenced bee-keeping last spring with one colony of blacks, which have swarmed twice, but they are doing nothing at the present time, it being too terribly dry here, having had no rain since May 22.

I think the American Bee Journal just the thing for beginners. MRS. H. A. D.

Manistee, Mich., July 21.

A Good Word for Mignonette.

I have not seen mentioned that nice little flower mignonette (*Reseda odorasa*) as a honey-plant. I think it is ahead of anything, where it can be grown, for my patch is constantly full of bees, no matter what other flowers may be in bloom, except linden. It is easily grown, particularly in moist, muggy land. There ought to be a large patch in every garden, for its fragrance alone, not to speak about bees. It blossoms from spring until cut off by frost. Its seeds cast in the fall will start in the spring, and if kept clean from weeds for a time it will soon occupy the whole ground as the year before. F. PISTORIUS.

Ann Arbor, Mich.

Peppermint as a Honey-Plant.

In answer to W. C., on page 457, in regard to peppermint for honey, I can state from positive experience that it will yield nectar in abundance, but no pollen. The honey is of a much finer flavor than any other I know of, and has a medicinal value for disorders of the digestive system. I am in a locality where it is raised by the hundreds of acres. My bees are situated so as to have access to about 500 acres of old and new mint. We have a mint distillery on our farm, and have planted five acres this spring, which will be in blossom in September. We have been in the industry five years.

The honey is clear, and far ahead of the clovers. There is nothing else which can

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Langstroth on the Honey-Bee, revised by Dadant—This classic in bee-culture, has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages; bound in cloth. Price, $1.40.

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be found to take first place in the honey line for lightness of color or for body or consistency, and it will not granulate as other sweets. The fall honey, as a rule, is amber in color, but with peppermint it is different. In several of our agricultural journals, I have had published, from time to time, articles on this herb. If readers of the Bee Journal insist, I will write it up. I am a new subscriber for the Bee Journal, and peruse its columns with diligence.

I am taking off, in 1-pound sections, principally of basswood, but very little clover, from 8 colonies over 400 pounds, and we had no good rain from June 28, 1894, until July 17, 1895, when we had a bountiful shower.

Old mint is in bloom in July and August. It is generally cut before the bees can get much honey. Strictly speaking, old mint has been set from two to three years. New mint is set in April and harvested in September. This same mint will be old next year, and so on.

CARSON VAN BLARICUM.

Ellis, Calhoun Co., Mich., July 27.

[Mr. Van Blaricum is hereby invited to tell us all about peppermint as a honey-plant. Every bee-keeper is interested in learning all he or she can about any plant that may be profitable to grow for the honey it yields.—EDITOR.]

Bees Did Well.

Bees have done well so far. Linden was splendid. I have taken an average of 60 pounds per colony of extracted honey, spring count, from 40 colonies, and increased 33 per cent. WM. MALONE.

Newburn, Iowa, July 27.

Too Dry for Bees.

I have two colonies at present. My bees are doing poorly. It has been too dry here this summer for bees to do well. Last winter was a hard one on them; I had 10 colonies then, and now have only 2. My bees have stored about 15 pounds in the upper story in 1-pound sections.

W. M. DANIELS.

Perrysburg, Ohio, July 23.

The Radish as a Honey-Plant.

I notice the bees working quite extensively on radish bloom. It seems to me, if it is a good honey-plant, that is, one that produces considerable nectar, it would be profitable as bee-forage. The bee-keepers are continually on the watch-tower for plants that would pay to cultivate for the bees, and I have noticed closely how they work on this flower. We had quite a large bed of radishes in the garden, and before we could use them the bees went to the bloom, and for the last three weeks, or a month, the blossoms have been abundant, and bees were working on them all hours of the day.

The putting forth of the flower and pod of the radish is an idea worth noticing. I simply call your attention to the bloom, not imparting anything new, but calling to mind the prolific nature of the radish at the bloom age. It begins with a cluster of of blossoms something like the jessamine, and they remain for a time, then you will

Honey & Beeswax Market Quotations.

CHICAGO, ILL., June 1.—We have our usual dull season which we look forward to and expect. Honey is entirely forgotten during the months of June, July and August. The market is pretty well cleaned up of all grades of honey, so the prospects are encouraging for the coming season. We are getting 13@14c. for light comb. J. A. L.

CHICAGO, ILL., July 30.—We are now having some inquiries for comb honey, and expect our first receipts of fancy white to sell at 15c.; No. 1 white will bring 14c.; no trouble to sell fancy honey; No. 2 quality sells at 10@13c., depending upon condition. White extracted, 6@7c., depending upon flavor; dark, 5@6c. S. T. F. & Co.

CHICAGO, ILL., Aug. 7.—Some of the new crop of comb honey has come on the market, and we have sold same at 15c. There is also sale for the darker grades at 8@12c. Extracted, 5@7c., according to quality, flavor and color. Beeswax, 25@27c. R. A. B. & Co.

CINCINNATI, O., Aug. 7.—Demand is lively for new extracted and comb honey, all old honey being closed out. Arrivals are fair but insufficient for the demand. Comb honey brings 14@15c. for choice white. Extracted, 4@7c.

Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, MO., July 20.—Old stock of honey well cleaned up. Some new comb on the market. We quote: New comb, No. 1 white, 1-lbs., 14@15c.; No. 2, 12@13c.; No. 1 amber, 12@13c.; No. 2, 10@11c. Extracted, white, 6@6½c.; amber, 5@6c.

Beeswax, 22c. C. C. C. & Co.

PHILADELPHIA, PA., June 18.—The new crop of comb honey is arriving slowly, and is in fair demand. No new extracted honey has arrived in this market as yet. We quote: Comb honey, 9@13c. Extracted, 4½@6c.

Beeswax is still declining. The adulteration of beeswax has demoralized our market this spring, and has hurt our sales considerable. Price, 25@27c. W. A. S.

NEW YORK, N. Y., July 6.—The market is about bare of comb honey and there is no demand at the present. The market is quiet on extracted. Demand is limited, with plenty of supply arriving to meet the demands and more. We quote: California, 6@6½c.; Southern, choice, 60@65c. per gallon; common, 50@55c. per gallon. Beeswax is declining and selling at from 29@30c. at present, but the indications are that the price will decline still further. H. B. & S.

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New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 120 & 122 West Broadway.
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I. J. STRINGHAM, 105 Park Place.

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C. C. CLEMONS & Co., 423 Walnut St.

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CHAS. DADANT & SON.

Philadelphia, Pa.

WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

notice the stem which holds the flower enlarging, and in this little stem the seed forms. The main branch grows a little higher, and another blossom sets out, and so on, until the branch is 18 inches long, all filled with pods, each pod having held a blossom for some time.

Now it occurs to me that radishes could be planted with profit; first, the tender radish for table use; second, flowers for the bees; third, seed to plant again, or sell to the seedmen. A large piece of ground could be planted, and in planting more every three weeks, we could have almost a continual bloom through the season.

Will the bee-keepers please give us a little light on radish bloom? How much nectar does it supply? What is the quality of the honey? CLAY C. COX.

Palouse, Wash., July 18.

Meager Honey Crop—Motherwort.

The honey crop here will be very meager this season. White clover is all dried up, basswood bloom is over, and no honey in the surplus-boxes yet.

I send a piece of plant which I would like to know the name of. I believe that it secretes considerable nectar, as bees are working on it all day. It grows in waste-places. GEO. H. PITMAN.

Lake Villa, Ill., July 10.

It is *Leonurus Cardiaca*, common motherwort. In speaking of this and other plants of the same family, Prof. Cook, in his "Bee-Keepers' Guide," says this:

All furnish nice white honey, remain in bloom a long time, and are very desirable, as they are in bloom in the honey-dearth of July and August. They, like many others of the mint family, are thronged with bees during the season of bloom.

ITALIAN BEES AND QUEENS.

Queens, 75 cents, or two for $1.00.

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TESTIMONIAL.

WILLOW GROVE, Del., July 16, 1895.
MR. H. ALLEY: The best queen I have came from you. The colony has stored 119 pounds comb honey from fruit bloom and crimson clover. White clover is a complete failure. J. COLBY SMITH.

HENRY ALLEY,
34Atf WENHAM, MASS.

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Between Aug. 15 and Sept. 15—over 300 Young 5-Banded Queens, yellow to the tip, as I am going to double up all my Nuclei for winter. I will sell them at 30 cts. each, $1.50 per ½ doz.

Reference—Rosedale Bank, Rosedale, Miss.; or Kline & Bert, or P. M. at Gunnison, Miss.

Money Order Office and P. O., at Gunnison, Miss. **J. H. SIPLES.**

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Convention Notices.

CALIFORNIA.—The next meeting of the Tulare County Bee-Keepers' Association will be held in Visalia, Aug. 14, 1895. All interested are invited. J. E. YOUNG, Sec.
Visalia, Calif.

TEXAS.—The Texas State Bee-Keepers' Association will meet at Greenville, Tex., Aug. 21 and 22, 1895. Good premiums are offered for best exhibits. All are invited to attend.
Deport, Tex. W. H. WHITE, Sec.

ILLINOIS. — The annual meeting of the Northern Illinois Bee-Keepers' Association will be held at the residence of O. Taylor, in Harlem, Ill., on Tuesday, Aug. 20, 1895. All are cordially invited. B. KENNEDY, Sec.
New Milford, Ill.

TENNESSEE.—The next annual meeting of the East Tennessee Bee-Keepers' Association will be held at Mulberry Gap, Tenn., on August 16, 1895. The members are urged to attend and all bee-keepers are invited to be present. H. F COLEMAN, Sec.
Sneedville, Tenn.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association in Fort Scott, Kans., on Sept. 19, 1895. All are cordially invited to come and have a good time. There will be a full program.
Bronson, Kans. J. C. BALCH, Sec.

WISCONSIN.—The Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting at Platteville, Wis., Oct. 8 and 9, 1895. "Come, every one." Don't get discouraged if we haven't got a crop of honey. We will have a good time at Platteville, just the same Bring your wives and daughters with you. Many interesting subjects will be discussed. M. M. RICE, Sec.
Boscobel, Wis.

North American Bee-Keepers' Association

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SECRETARY.—W. Z. Hutchinson...Flint, Mich.
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This department is only for your "Wants" or bona-fide "Exchanges," and such will be inserted here **at 10 cents a line** for each time, when specially ordered into this department. Exchanges for cash or for price-lists, or notices offering articles for sale, will not be inserted here—such belong in the regular advertising columns, at regular rates.

TO EXCHANGE—Lossing's "Civil War in America" (3 vols.), for Honey. Address. J. C. YORK, Alliance, Ohio.

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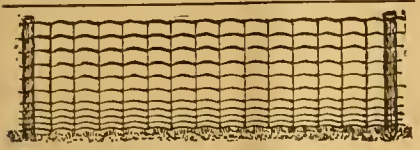

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Friends, I will have 200 Select Tested Queens for sale Sept. 1, at $1.00 each or $10.00 per dozen. Untested, 50 cents each, or $5.00 per dozen. Tested Queens 75 cents each, or $6.00 per dozen, either Golden Italians or Imported stock at same price. Safe arrival and satisfaction guaranteed. Address.

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Can Foul Brood Originate in Putrescent Pollen?

Query 984.—Is it possible for foul brood to originate in putrescent pollen?—Old Sixty.

J. A. Green—I think not.

B. Taylor—I do not know.

Eugene Secor—I think not.

C. H. Dibbern—I think not.

E. France—No, I think not.

W. R. Graham—I think not.

Dr. C. C. Miller—I think not.

G. M. Doolittle—I could not say.

P. H. Elwood—Not without the foul-brood germs.

Prof. A. J. Cook—Is it possible to raise a fig from a thistle?

Chas. Dadant & Son—Not unless the germs of foul brood are there.

Dr. J. P. H. Brown—Not unless the germs of the disease are present.

W. G. Larrabee—Ask the foul-brood inspector, or any one that knows.

Jas. A. Stone—I have never seen foul brood, and of course do not know.

R. L. Taylor—No, never, unless from seed of the disease first planted there.

Wm. M. Barnum—Yes; cases of this kind have been recorded. It is well to be on the safe side—in the spring, especially.

H. D. Cutting—Not unless the germs of foul brood are taken there. I don't believe you will take the smallpox from the itch.

Mrs. L. Harrison—I should like to answer the querist by asking this question: Can you produce yellow fever with smallpox virus? Something from nothing is against Nature.

Mrs. J. N. Heater—I don't know, though it is something to deal gently with. We know there are many things which produce sickness in the human family, though it may not always produce *smallpox*.

Allen Pringle—If you mean would it be possible for the putrescent pollen to originate the foul brood spores, I think not. If you mean might the spores find congenial lodging in the putrescent pollen and develop there, I have my doubts about that, too.

J. E. Pond—In my opinion, no; and I have yet to see any evidence that to my mind amounts to proof that such can be the case. The matter has been discussed somewhat, and I know of but one man who makes the claim that it can, and his opinion is of no value to myself.

G. W. Demaree—I think not. Blue-grass Kentucky has never shown up a case of virulent foul brood, but I have seen dead brood that smelled to the skies. All dead animal matter will become "foul." But sour pollen is another thing. I would not fear its presence as much as the decaying animal matter.

Rev. M. Mahin—I have never seen a case of foul brood, and do not wish to; but I am very sure that foul brood can only originate from the spores of the *bacilli* of foul brood. There is no such thing as spontaneous generation. Foul brood originates from, or is produced by, living germs, and life comes only from life.

Rev. E. T. Abbott—It is not possible for foul brood to originate any place where there are no germs which cause foul brood, any more than it is for ducks to spring up spontaneously where there are no eggs. Do not think "putrescent pollen" (whatever that may mean) would furnish a good nidus for the germs.

Globe Bee Veil

By Mail for One Dollar.

Five cross-bars are rivited in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through.

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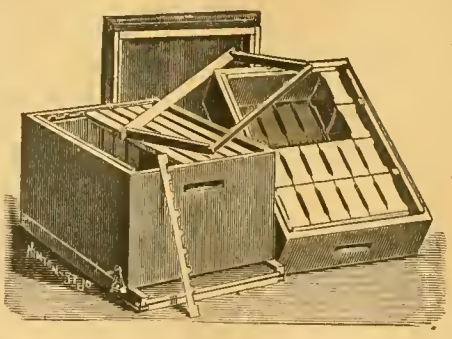

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THE A. I. ROOT CO.:—I must compliment you on the degree of perfection to which you have attained in the manufacture of bee-supplies. I have been, as you may know, in the bee-business for about 20 years; and during that time I have obtained my supplies from many manufacturers, north and south, but have not found any that would compare favorably with the goods made and sold by you, either in quality of material used or in workmanship, so I have settled back permanently on the A. I. Root Co. as my base of supplies.

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35th Year. CHICAGO, ILL., AUG. 22, 1895. No. 34.

Contributed Articles.

On Important Apiarian Subjects.

Best Capacity and Shape for Brood-Chambers, and How Obtained.

BY C. W. DAYTON.

In 1882, in my apiary in Iowa were 120 brood-chambers 3,466 cubic inches in capacity, and carrying 16 Gallup frames 11¼x11¼ inches. The inside measure of this hive was one foot in depth and width, and 24 inches in length. It was designed to run the whole number of combs for brood-rearing up to the opening of the honey harvest, when an upper story was supposed to be necessary for the accommodation of extracting-combs. Or, where the colony was operated for comb honey, the least occupied combs were taken out and the space in the ends of the hive filled with 2-pound sections. Two-pound sections being six inches square, four of them exactly fitted the end of the hive when set upon the bottom-board. I have often wondered why the Gallup hive or frame was devised. Because the hive could be constructed of 12-inch lumber, or because the hive was the width and depth of two 2-pound sections, or what?

Well do I remember the failure of the queen to fill to my satisfaction all the 16 frames. Then I thought the brood needed spreading. The result of much spreading was brood scattered and thinly disposed in many combs, so that much of it chilled in the cold nights. After three years' use it was found that not more than one-half of the colonies would become populous enough to require an upper story, if the honey was extracted and not allowed to accumulate in the lower story. At this time the ends of the hives were sawed off to reduce the number of combs to 12. After a couple of seasons' use, the brood-chambers were decided to be still too large. There continued to be from three to six combs of honey instead of brood in the lower story. The honey was wanted in the upper story. Again the hives were sawed off, reducing the number of frames to nine. This brood-chamber contained 2,088 cubic inches. That sized brood-chamber was continued for several seasons following, with perfect satisfaction, so far as size was concerned—the lower story contained the brood in compact form, and the super story caught nearly all the honey whenever the honey-flow was of consequence. Yet attention was required to provide sufficient winter stores. This was done by the insertion of full combs of honey reserved at extracting time. This procedure causes a little more labor at the time of preparing the colonies for winter, but it is far more than balanced by our being able to avoid unnecessary combs of honey in the hives during the busy season. About one queen in 40 appears to want two stories for brood, but I believe that such brood when compactly disposed can nearly always be contained in the lower story.

In 1889 I began to look favorably toward the production of comb honey in 4¼x4¼ sections, and the dimensions of the Gallup hive was deemed exceedingly unfavored to the adaptation of the standard one-pound section. I was compelled to adopt the Langstroth measurements. For two seasons I handled 40 colonies, followed by one season of 250 colonies, on Langstroth frames in both 8 and 10 frame hives. As a 10-frame colony is examined, it seemed as if the same amount of brood could be reared in an 8-frame hive; yet when a colony has been brought up in an 8-frame it seems to possess less

Mr. W. A. Chrysler—See page 536.

available strength. The 8-frame colony does not enter the super in greater force than does the 10. But when a 10-frame colony is contracted down to 8 frames, there is a perceptible increase of energy. I account for it in this wise: There is seldom any brood in the two outside combs. This leaves 8 combs for brood in a 10-frame hive. Take away one more comb for the pollen, and there remains 7 combs with brood in. Apply the same conditions to the 8-frame hive, and only 5 combs remain for brood. Allowing 1¼ inches to the comb, the lateral diameter of the brood sphere is 7½ inches, while if the whole length of the comb was to be occupied, it would be 17 inches. The 10-frame hive exceeds the 8-frame not by two segments at the sphere's edge, like the slabs which are sawed from a log, but it corresponds to two perfect and complete planks from the heart of the log. This would enhance the strength of the colony one-half instead of one-fourth, as may be supposed.

The disproportionate frame length may not cut so prominent a figure in a southern California climate as in northern latitudes—Colorado, for example. In Colorado the nights, even late in the spring, are surprisingly chilly. Then the middle of the days are as warm and sunshiny. In hives facing south the sun beats against the end so warmly that it draws the brood toward that end compactly against the end-bars of the frames, and to the very corners. Where there was brood in 8 combs, it was placed so far to the south that 6 inches of the north ends of the combs might have been removed without disturbing a cell of brood.

In Wisconsin there are more clouds during the days, and the days and nights are nearer of an even temperature. When two colonies are placed side by side, with an inch of pressed chaff between the hives, the brood in each colony occupies the side of the hive nearest its neighbor. Even the side combs contained brood on both sides. The remote sides of the hives were unprotected, and the weather inclement. If brood will be placed far away from the cold end of a Colorado hive, why would it not be placed as far as possible from the four sides of the Wisconsin hive?

When a 10-frame hive is changed to an 8-frame, by taking away two frames, it forms a chamber which is really longer, in effect, than the original 10-frame chamber because of the narrowed brood sphere. In other words, and in consideration of climates, kinds of weather and different seasons, there is less consequence in *how much* space is removed than in *how* it is removed. Working against the natural tendency wastes warmth and energy.

Had there not remained a broodless space in the ends of the combs of the 10-frame hive, the 8-frame hive would never have suggested itself. Nearly every one who went down to 8-frames has wished that he were back again. Instead of decreasing the number of frames, why not try the same number of frames of *less length*. I have kept bees from a "bread and butter" standpoint in Wisconsin, Iowa, Colorado and California, and have found the hive from which I never expect to change. Climates and localities do not affect its utility. It is the crosswise Langstroth of 10 frames, or 2,020 cubic inches. The 8-frame Langstroth contains 2,100, and my old 9-frame Gallup hive 1,980 cubic inches. The 8-frame Langstroth is large enough, but the shape is very bad. Since using ten 13⅜-inch frames to the hive for three seasons, I believe that the colonies become as strong as with the 17⅝ frame. If it was calculated to have winter stores in the ends of the long frames, or in the side combs, I should want at least 12 of them.

I have arrived at the 2,000 cubic inches capacity of the brood-chamber, from two starting points in the past 13 years, by cutting down and trimming off the useless encumbrances.

For winter, or for an abundance of stores at any emergency, a half-depth story remains upon the hives, and the honey is nearly all kept in it. Bees readily enter and replenish a receptacle from which they are accustomed to obtaining their daily rations. With this super there it is always ready to catch a small run of surplus, and enables the surplus receptacles to be placed very near to the brood. The brood-chamber is 14¼ inches square by 14⅝ inches deep, forming an almost perfect cube. Florence, Calif.

A Plea for Extending the Honey-Resources.

BY J. A. GOLDEN.

The terrible drouth we have had in this locality has completely blasted all hopes for any surplus, unless a fall flow comes, of which we have but little hopes from present indications.

The basswood was so heavy with bloom that it seemed the limbs would break from the trees, and for three days I never saw so many bees work on them before at one time, but the drouth was too much for them, and the bloom was of but short duration.

The white clover was so badly dried up that scarcely a bloom could be seen even along the water-courses. The tulip, or poplar, yielded fairly well, but was soon dried up. The sumac would have been all that could be desired, could we have had one or two good showers during its bloom, but likewise it had to follow in the same line, and unless we have other sources from which bees can procure nectar throughout this location, bee-keepers will have to look for other fields, or abandon the bee-business.

It seems that the farmers in this southeastern part of Ohio have had but little desire to sow Alsike, crimson or alfalfa clovers. Having read Frank Coverdale's letter on Alsike clover, published in the bee-papers some time ago, I had it republished in our county paper, with my own remarks, thinking to induce some of our farmers to make trial experiments, from which several farmers became anxious to sow the Alsike, but withheld on account of the drouth. Wishing to know more about the cultivating of Alsike clover than Mr. Coverdale gave in his article, I wrote him for full particulars for publication, to which he kindly responded, and I had it published, and if next year should be favorable for seed sowing, there will be quite a little sown in this section, as I believe every farmer that got a copy of the Coverdale article has preserved it, so far as I have inquired, and if bee-keepers in localities where the honey-sources are fast disappearing, don't make some effort to encourage and induce the farmers to grow honey-producing plants or grasses, the profits from honey in such localities will be small.

Would it not be wisdom for bee-keepers to have more knowledge like Mr. Coverdale gave on Alsike clover, as a profitable investment, spread upon our county papers from time to time? Thus hundreds of farmers would be encouraged to raise the new grasses to their well deserved profit, as well as procuring a bountiful supply of the most healthful sweets that God has deigned to bestow upon man.

Then, bee-keepers, let us not stand idly by and see the bee-industry die for the want of honey *sources*, but step to the rescue, even to purchasing the seed, if need be, and thus assist to our own good. This is not only right, but our duty as well. There are hundreds of farmers who, if presented with a few pounds of seed, would gladly accept it, and give the matter of its production their most careful attention, and soon the waste-places all over our country would bloom for our bees to revel in, and make glad many a bee-keeper's heart.

Reinersville, Ohio, July 29.

Honey-Production Around the City of Philadelphia, Pa.

Read before the Philadelphia Bee-Keepers' Association

BY F. HAHMAN, JR.

I do not consider myself quite equal to the task of writing on this subject, but I will give such data and figures about the amount of honey produced in this section, as the facts in the case appear to me from such observation as I have been able to make.

We all know that Philadelphia is not an especially good honey market compared with other cities, this fact being mainly due to the lack of enterprise shown by the bee-keepers themselves. The honey handled by the wholesale dealers and commission houses is all shipped to the city from a distance; while the honey produced in the vicinity of the city is all sold directly to the consumer by the producer.

The amount of honey, both comb and extracted, produced within a radius of 12 miles of Philadelphia is about 22,500 pounds, in round numbers. This calculation is based on the

product of 1,500 colonies, with an average of 15 pounds per colony. It is difficult to estimate exactly how many colonies are actually kept within the above radius, but from various inquiries among the bee-keepers, and from personal observations, I find that 1,500 colonies to be about the number kept. The average of 15 pounds per colony represents the actual production very closely.

The average amount of honey produced around Philadelphia by those employing the latest improved hives and apparatus, and managing their bees carefully, is from 25 to 50 pounds of comb honey, or from 40 to 75 pounds of extracted honey per colony; naturally there are exceptions to this rule, some of the bee-keepers obtaining larger returns, due to an extra amount of energy and skill on their part; occasionally large yields are gathered as the result of an abundant yield of nectar by the flowers; such yields are analagous to a good year for farm crops, or a good fruit year, and occur at intervals of five or ten years apart; in estimating the returns received from the bees, these extra-good seasons do not increase the ratio of average production, on account of being counterbalanced by an occasional year when the honey crop is a failure, when the flowers secrete little or perhaps no nectar whatever.

I believe a safe estimate for the production around this section, so far as comb honey is concerned, is about 25 pounds per colony during the regular honey-flow in May and June; and to this we can frequently add about 15 pounds during the fall months, making a total of 40 pounds; allowing each colony to provide its winter stores in addition to the above.

At this point I wish to call attention to the fact that some extra-strong colonies will gather 60, 70, or even more, pounds of surplus honey in a season, but to bring the average of a whole apiary, including the weaker colonies, to 40 pounds, requires extra-good management.

The price received for this honey by the Philadelphia bee-keeper is about 15 cents per pound; many receive more, however, and that is usually the result of shrewd business talent; but 15 cents represents the selling price at which we can dispose of our honey readily, and in quantity if necessary; hence we find that our returns are about $6.00 per colony, as the result of considerable hard work.

The production of extracted honey will yield a somewhat larger cash return per colony, where the bee-keeper is able to readily dispose of the same at 10 cents per pound, but it is difficult to sell large quantities of extracted honey, except at a price yielding no profit to the producer.

The quality of the honey gathered in the Phildelphia district is good, generally speaking; it is not of the superior amber shade of basswood honey, nor quite so fine flavored as the white clover honey of our Western States; but it is far superior in taste to the light-colored basswood honey, consigned to our city from the large apiaries of New York and Vermont, which is considered by our wholesale dealers the acme of all honey-production. The consumer of honey will prefer our home-produced article, to the vaunted basswood honey, after one trial in nearly every instance.

The source of our flow of honey during June is white clover, with the admixture of nectar from several trees, blooming about the same time; such as the tulip tree, basswood, catalpa, honey-locust and others; also the honey from the blossoms of the onion, which is extensively cultivated in the market gardens around the city, some of these giving the honey a darker color, and a slightly different flavor from pure white clover honey. The sources of this dark honey sometimes fail, and we have at such times obtained fine white clover honey without any admixture. The honey gathered on the opposite side of the Delaware, in New Jersey, is generally of this kind, because the honey-yielding trees do not abound there.

The honey gathered during August and September is principally from buckwheat, and enough honey from asters and goldenrod to take away the rank flavor of pure buckwheat honey. During some seasons the fall flowers, particularly asters, yield so abundantly that but little buckwheat honey is stored, the honey being equal in flavor and appearance to the early summer crop.

We frequently read in the bee-journals how to prepare our comb honey in attractive shape for the market, and it is well for all of us to grade our honey carefully. Beautiful white section-boxes, nicely capped, without any leaks, should always be sorted to themselves, and will at all times command a fancy price; while a second grade of darker honey, and boxes with some few cells not capped over, can be sold somewhat cheaper, and will therefore find a ready sale. We can also have a third quality of comb honey, such sections as the bee-keepers from a distance can never send to market—sections that are not fully capped over, perhaps one-fourth of the cells remaining uncapped; it is always more profitable to sell this kind of honey than to hold it over for the bees to finish the following season; the remuneration obtained for it will be perhaps not much over half of that obtained for first-class honey, but it will help to swell the general income from the bees, and form an item which the bee-keeper, who ships his honey to a distant market, can never take advantage of.

Unless I am greatly mistaken, there are no bee-keepers around Philadelphia who make honey-production an exclusive business as a means of gaining a livelihood, and I do not think that the production of honey holds out sufficient inducement to a live, energetic man to engage in, with the above end in view; but as an auxiliary branch it certainly offers a rich field to all of the near-by farmers, who attend the retail markets of our city and dispose of their farm products direct to the consumer. Vast quantities of honey could thus be sold, netting the producer the highest possible return, and materially augmenting the income of our rural population. If comb honey were thus displayed for sale on the farmer's stalls, the conditions of a poor demand for honey would soon fade away, and give place to an ever-increasing demand for good honey produced in our immediate neighborhood.

The price realized by the farmer would always remain at the top notch, nor need he ever fear the competition of the large honey-producers who ship to the city from a distance, any more than he fears the inroads on his trade of the egg and butter dealers, who sell cheaper than he does; he always manages to sell his produce of that kind at a little higher figure than the dealers ask for theirs.

To secure a good supply of honey, it is necessary to stimulate the bees early in the season, ensuring plenty of worker-bees when the honey harvest arrives. Mr. G. M. Doolittle has contributed many excellent articles on the production of comb honey; one of his methods is to have all swarming over before the large basswood honey-flow arrives. All his colonies that have not swarmed up to the beginning of the basswood flow, are "swarmed" artificially. Mr. Doolittle's plan is to have the colonies in the utmost populous condition during the honey-flow; in this lies the secret of harvesting large crops of honey, as Mr. Doolittle's success in that line has amply proven.

Philadelphia, Pa.

Five-Banded Bees—Preventing Swarming.

BY REV. W. P. FAYLOR.

Having had a good deal to do with the very yellow bees, and after spending much money, time and labor to propagate them; and having tried them from every source obtainable—from the East, West, North and South—I have been requested to give my opinion of them. I have hesitated to do so, for fear of trampling upon somebody's feet, but what I shall

have to say is on my own line of experience, and is presented with the best wishes to all bee-keepers.

I obtained my first 5-banded bees from L L. Hearn, but in a very short time I learned that G. M. Doolittle had given Mr. Hearn his start to these bees. Mr. Hearn's bees proved to be unprofitable, and so the next queens were obtained from the author of "Scientific Queen-Rearing." The first queen I obtained Mr. Doolittle had named "Dandy," for which I paid $6.00. I introduced her to hatching brood, as the weather was warm, and everything seemed favorable for a colony of "goldens," as I added a few more frames of hatching brood; but what was my surprise in a couple of weeks to find this fancy queen failing. I then put her into a nucleus and kept her colony weak until autumn. Early in October I put her nucleus in a chaff hive, and gave her plenty of good combs with nice, sealed honey, and brood hatching, from a good hearty colony, and as I knew the bees would not expect much from their queen during the winter, I left them severely alone until early in the spring.

On opening the hive I found a young queen and "Dandy" still at large in the hive. I lifted out a comb with "Dandy" and adhering bees, making a weak nucleus. In three weeks "Dandy" had disappeared, and three queen-cells were started. These were given to a strong colony, made queenless, to feed and complete the cells. Mr. Doolittle sent another to replace her. That was very kind in him, but the second one never filled more than three or four Langstroth frames with brood; and from this queen, and the three reared from "Dandy," I reared 29 queens, nearly all of which I sold for $2.00 for choice, and $3.00 for the selected or very best. Some of these queens were sent to Canada, and some to Pennsylvania, some South and West. Some of the old readers will remember that I sent the samples of bees to Thomas G. Newman, the then editor of the American Bee Journal. The bees sent showed the sixth yellow segment. Of course these were picked bees. So far as I can know, and have knowledge, not one of these reared fancy queens produced bees that were hardy enough to come through the winter without adding black stock.

My next breeder was a very yellow one from J. D. Givens, of Texas. This queen kept two or three combs fairly stocked with brood and eggs for about three months, and then was superseded by the bees. I keep bees partly for pleasure and study, and took a fancy to the yellow color; but now I am about dead to the "goldens," though it was a hard death to die.

Last autumn I ordered one more of these queens from Mr. Wood, of Massachusetts, and one from the famous breeder of these bees in Maryland. I gave each plenty of combs with late hatching bees from hardy blacks—these were packed in a long chaff box containing 11 colonies. One of these colonies died early in the winter. The other was about fizzled when I unpacked them in the spring. The queen was yet alive, and a few black bees, but not a single yellow bee lived through the winter.

But the greatest fault I find with them is the unprolificness of the queens. I never had a colony of them to get populous enough to get the swarming-fever. When these queens mate with hybrid drones, they are some better, but all in all the "goldens" ought to soon be a thing of the past, unless they can be improved in some way.

THE PREVENTION OF SWARMING.

To keep bees from swarming, I practice the following method:

1. I keep the drone-brood shaved out. Bees will swarm with but few drones, but they are sure to swarm when crowded with drones.

2. When the colony begins to get strong, I put a couple of the middle combs on the outside, and the two outside combs in the place of the two middle ones removed, then remove two more of the middle combs, and in their place put two empty combs. Now the bees will begin to think they are not quite ready to rear drones and young queens.

3. Raising the entire brood-chamber by placing a piece of lath under each corner of the hive or brood-body, so that the air can freely circulate under the entire cluster of bees, is the best preventive of swarming of any one thing that can be done. I believe I am the first to make mention of this through the American Bee Journal. I have often discouraged swarming even after queen-cells had been started, by simply raising the brood-chamber a fourth of an inch from the bottom-board; and with what a rush will the bees crowd into the upper apartments when this is done!

Updegraff, Iowa.

Canadian Beedom.

The North American Bee-Keepers' Association.

The July number of the Bee-Keepers' Review is chiefly devoted to a consideration of the above-named organization. In commenting on one of the articles, the editor says: "Affiliation was done away with at the last annual meeting." This will be news to many. But as no full report of the last annual meeting has yet been given to the public, only those who were actually present can be expected to know what business was done. It is to be hoped that the Secretary will see to it that the Constitution and Rules now in force are printed for consultation by the members. Otherwise they will be like moles, working in the dark.

[The Constitution as revised at the last annual meeting was published on page 60 of the American Bee Journal for Jan. 24, 1895.—EDITOR.]

Mr. W. A. Chrysler.

W. A. Chrysler, whose picture is shown on the first page this week, was born Nov. 14, 1863, in the Province of Quebec, Canada, and at an early age moved to the Province of Ontario with his parents and settled on a farm near Chatham. His time was spent at practical farming and obtaining a fair business college and high school education.

When about 17 years of age he took the "bee-fever" very badly, as some call it, and he has had it ever since, with no let-up.

Soon after embarking in the bee-business (having wheels in his head) he began making some of his own supplies, not that he could not buy them cheap enough, but it was, and is, his special delight to work with machinery as well as with the honey-bee. He made most of his machinery and learned to operate it by practical experience. People looked to him for supplies and he naturally drifted into the supply business in connection with the bee-business.

Mr. Chrysler takes special delight in attending bee-keepers' conventions, and no doubt will be on hand at the Toronto meeting of the North American. The Ontario Bee-Keepers' Association, at its last meeting, elected him as one of its Directors.

He has been married nearly five years, and has one of the best of wives and two bright children—a girl and a boy.

Honey-Producers and Apicultural Organizations.

In giving his opinion about apicultural organizations in the July Review, Mr. James Heddon says one weak condition in connection with them is that the leaders have not been honey-producers, consequently they were not filled with api-

cultural enthusiasm. The term "honey-producers" is here meant to indicate people who get their livelihood by keeping bees. Strictly speaking, all who keep bees are honey-producers in a greater or less degree. Even those who keep bees as a scientific pastime get some honey, and are therefore in a sense honey-producers.

At the very outset Mr. Heddon makes an incorrect statement, which I boldly deny. He says the leaders in our apicultural organizations have not been honey-producers. I assert, on the contrary, that even in the sense of making a business of honey-production, the leaders in these organizations have been of that class, and I appeal to the records of membership for proof of what I say.

In answering the question what caused these non-honey-producers to attend conventions and seek a leading position there, he says: "Some desired to be seen." How does he know that? Did any of them confess to him that this was their motive? Not likely. Others, he says, had axes to grind. Again, how does he know? He could only suspect, and was he not open to suspicion himself with his pollen theory, his new hive, and other contraptions? He says further, that these men had some money speculation in view. Suppose they had. If it was honest speculation, there was no harm in that. Why, Mr. Heddon's only object in bee-keeping is to make all the money he can at it. There are some bee-keepers who pursue the business for scientific purposes, or for the public good. Mr. Heddon is not of that number. He despises all such, and is never tired of pouring contempt on them. He is the last man who should complain of a bee-keeper who goes to a convention to make a little money. He never went to one himself for any other purpose. Time and again he has asserted that he takes no interest in any phase of bee-keeping except for the money there is in it.

Mr. Heddon enumerates as the prominent ones at conventions: "Preachers, professors, publishers, supply dealers, and a few side-issue bee-keepers, who have been at the front as leaders because of their energies to get there, and the foolishness of bee-keepers to assist them." Let us look at the classes here specified, for a moment. 1. "Preachers." Mr. Heddon may kick at the fact as much as he pleases, but he cannot get rid of it *as* a fact that there is no class who have rendered bee-keeping more substantial service than "preachers." If there were only one name of this class to mention, that of Langstroth should be enough to protect it from indignity and crown it with honor. But there is a long list of such names, and those which have been connected with apicultural conventions have been no discredit to them. "Some preachers can talk well," Mr. Heddon admits, as if what they said were all talk. Is this honest truth or unfounded slander?

Mr. Heddon next pays his respects to "professors." In all the history of our conventions, I can only now think of two "professors:" Prof. Kirtland, who originated the first apicultural convention held in North America, and Prof. A. J. Cook, who certainly doesn't play second fiddle to Mr. Heddon or any other live bee-keeper on the continent. 3. "Publishers"—who certainly had a right to be there to report the proceedings. 4. "Supply-dealers"—whose business naturally and properly took them there. 5. "A few side-issue bee-keepers." Why, the vast majority of bee-keepers are of this class. There are not half-a-dozen honey producers in Mr. Heddon's exclusive sense on the face of the earth. He is not one himself. Yet he says, "First, give us honey-producers, and then give us the best speakers and writers, *from among that class.*" The italics are his.

The thing is absurd on the very face of it. See how it would work in other directions. Would you exclude all but teamsters, cab-drivers and such as handle horses for a living, from Horse Associations? Would you exclude all but farmers from the management of Agricultural Associations? We have "the greatest show on earth" of this kind here in Canada. If you doubt this, come and see it when the North American bee-keepers meet in Toronto, next month. That great Industrial Fair was gotten up by business men, and has been run by such from the beginning until now. Mr. Heddon says "the organizers and manipulators of our associations are possessed of too much theoretical talent;" but a man may be a good, practical bee-keeper, and yet have no talent as an organizer or manipulator. Mr. Heddon has no talent of this kind himself, or he would have shown it before now. He has had chances enough.

He says: "Put your preachers, professors, and most of your literary bee-keepers, back on the back-seats, where they can learn something practical," etc. Yes; get on a hustle, and make a big procession of them—Father Langstroth at the head, and Professor Cook following closely at his heels, other preachers, professors, and most of your literary bee-keepers "comin' arter," and see what a motley crowd you will have left, Mr. Heddon rallying them with a Salvation Army drum, to save the precious remnant—the "righteous few" who have no taint of preaching, professional or literary work upon them. Mr. Heddon is a nice man to be embarking in this kind of crusade. He undertook, all-sufficient practical bee-keeper that he is, to play a lone hand with a very modest literary venture, a bee-quarterly, no less. He would have no literary help—not he. He would "do it all himself, personally." Well, he has gotten out six numbers, and in the last makes the following humble confession:

"Now we begin to see that unless we make some kind of a change, we cannot fill our four large pages with really useful editorial matter many more issues, and we may be compelled to accept correspondence, and will be very glad to test our skill in selecting writers whose advices if followed will lead the readers on to success. We may also add some of our best original matter on some other subject, but at all events we shall endeavor to overlook nothing of value that appears in our bee-literature and observation."

Poor man! He may "be compelled to accept correspondence." Who will furnish it? No self-respecting literary bee-keeper, surely, after the contempt and derision Mr. Heddon has poured on this class of writers. N. B.—There has been great mortality among bee-periodicals. Most of them have failed for want of money. But this one is *in articulo mortis* for want of brains! In six quarterly issues this prolific writer has actually run out of topics! Not only is he afraid he will be "compelled to accept correspondence," but may have to "add some of our best original matter on some other subject." Well, whatever you do, Mr. H., don't follow A. I. Root's example and give us a sermon, because then you would rank among the preachers. Besides, the kind of discourse you would give would be like the plantation darkey's sermon on pig and chicken stealing—it would "bring a coldness over the meetin'."

If it be thought by any reader that this article is rather caustic, my apology shall be in Mr. Heddon's own words in the Review article I have been criticizing. They are as follows:

"Please excuse the plain and frank style of this essay, but you asked me for it and you have it. As you know, I am a very plain and outspoken man, but I mean well. I like to be talked to in the same way. And when I am wrong that kind of talk does me much good."

The last sentence is particularly gratifying. I am quite sure Mr. Heddon is wrong this time, and it is a great satisfaction to know that when he is so, it does him good to handle him without gloves. If he shows due improvement in the present case, I shall be encouraged to do it "some more."

That New Song—"Queenie Jeanette"—which is being sung everywhere, we can send you for 40 cents, postpaid, or club it with the American Bee Journal for one year—both for only $1.10. Or, send us one new subscriber for a year (with $1.00), and we will mail you a copy of the song free.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Hiving a Swarm that Settled on the Grass.

Please tell how to hive a swarm of bees that has settled in the grass. J. S. Y.

ANSWER.—The handiest thing in the world. Just set a hive on the ground near them, or over them, and let them run into it. If they don't go in fast enough to suit you, blow a little smoke on them.

Five-Banded Queen and Black Drone.

Will a 5-banded golden Italian queen, mated to a black drone, produce all 3-banded bees? If so, will they pass for pure Italians? P. W.

ANSWER.—I don't think you would find such uniformity, but would likely find the offspring varying from very yellow to black.

Variations of the Langstroth Frames.

I have 12 8-frame hives that I bought, all one size; they are the pattern that was used here some years ago, and they winter bees well.

1. What is the name of a frame 15 inches long and 10¼ deep, with V-shaped top-bar for comb foundation?

2. Where can they be obtained? J. E. T.

Orleans, Mich.

ANSWER.—I don't know. There are so many variations of the Langstroth frame it would be hard to keep track of them all.

Sweet and Crimson Clovers.

1. When is the right time to sow sweet clover seed, and how much per acre?

2. Is crimson clover a success for bee-men?

Gracey, Ky. J. G. N.

ANSWERS.—1. Sweet clover can be sown as thickly as red clover, although half as much seed will do, and it can be sown at the same time. Possibly it may do best to be sown in the fall, on hard ground, where it will be trodden in by horses or cows.

2. Crimson clover has hardly a settled reputation as yet, but the claim is made for it that it is a fine honey-plant.

Laying-Workers Again.

On July 5 a little girl here found a swarm of bees on a bush, and put them into a nail-keg. On the 16th I bought them of her, and put them into a new hive with foundation in four frames. Upon transferring them I found that they had comb enough built to contain five or six pounds of honey, and about half of it filled, and some with bee-bread, but not a sign of an egg anywhere. I looked them over carefully, and could not find a queen, but found a bee that looked something like a small drone—a very large worker, with wings very ragged on the ends and edges, and seemed to be unable to fly much. I called it a drone, and immediately sent for a queen, and she came on the 19th; I introduced her in the regular way.

This morning I watched them, and they seemed to be at work, bringing both honey and pollen. This afternoon being 48 hours after introducing, I thought I would see what she was doing, and found they had hardly begun to let her out, so I thought I would examine the frames and see what they were doing below. Imagine my surprise at finding a great many half-drawn-out cells with eggs in them, some with one, some with two and three apiece. On one side of one frame was a cell that I should call a queen-cell, with three eggs in it, and on the opposite side a cluster of three nearly as large, but not hanging out as prominent, all containing from one to three eggs. Then I thought of my (so-called) "drone," and my wife and I looked the frames and whole hive over very carefully, and could not find "him," so I placed the cage back on the frames and left them.

Now this thought occurred to me: Could it be possible that the queen in the cage is laying, and the workers are depositing the eggs in the cells? Was such a thing ever heard of?

The colony has been dwindling away since they were caught, and I have thought I should give them brood-frames from another hive as soon as they accept the queen all right. The eggs are deposited in the cells very irregularly, some on end, some leaning to one side, and some flat on their sides. I shall watch them with a great deal of interest, and would like you to give me what information and advice you can.

AMATEUR.

ANSWER.—Your colony contains those troublesome pests—laying-workers—and if you fail in successfully introducing the queen, as I am afraid you may, probably the best thing you can do is to break up the colony. If anxious to preserve it, however, give it a frame of brood. If you have a young queen just hatched, it will probably accept that.

Renewing Foundation in Brood-Frames.

How often would you supply foundation to brood-frames? How would you proceed? SUBSCRIBER.

ANSWER.—I'd supply it once for the lifetime of that frame. In that case, of course, it would be nothing but the ordinary fastening of foundation in the frame. Your question sounds a little as if you thought it necessary occasionally to renew the comb in whole or part. I don't believe that's necessary.

Feeding Back Comb Honey.

I have a lot of comb honey taken out of a box-hive. Can I feed it to the bees to help fill up sections? If so, how? H.

ANSWER.—I doubt if you can do so profitably. If it was mine, I'd eat the chunk honey, or sell it for a less price. If you try it at all, perhaps you better get the honey out of the comb and dilute it considerably. But the best plan is not to try it.

Queen at the Hive-Entrance.

I have just returned from a walk in my apiary. While among the hives I saw among the bees, on the alighting-board at the entrance of a hive, a large, yellow, Italian queen. The bees were blacks, and the queen looked very showy among them. About two weeks ago there hatched in this hive a yellow queen from a cell given from an Italian queen. At that time they had no queen. Now what did this mean? The bees seemed to be excited, and following her around. After crawling around this way awhile she went back into the hive, and did not come out again while I watched. Was this the queen that belonged to that hive, or was it one from some other? If it was the queen from some other hive, what was she doing there? Why did not the bees kill her? If it was the queen that belonged to that hive, what was she doing there? P. A.

ANSWER.—Hard to tell whether she belonged to the hive or not. If she belonged to the hive, she may have been out on her wedding flight, as that is sometimes delayed. If she belonged to some other hive, and flew there by mistake, the bees probably did kill her. But they don't always pounce on a queen and kill her as they do a robber, but let her go perhaps for a time and then ball her.

Caging Queens During a Honey-Flow—Best Hive Begin Bee-Keeping.

1. Do you approve of, and do many of your leading apiarists practice, caging the queen during a honey-flow?

2. What are the advantages to be gained? A *greatly* increased surplus?

3. And what the disadvantages?

4. Could the queen be confined in a Benton cage? And must a few other bees be in the cage with her?

5. If you—an experienced apiarist—had been some time out of the business, and were about to start bee-keeping, what sort of hive would you adopt—the divisional brood-chamber,

a la Heddon, or the Root dovetailed? If the latter, 8 or 10 frames? S. A. D.

Mossel Bay, South Africa.

ANSWERS.—1. I do not think a very large number practice it. Some of our best men, however, have practiced it, and perhaps do so yet. I gave it a pretty full trial, but did not make a success with it. Whether the fault was with me or the system I cannot say.

2. The one advantage aimed at is the prevention of swarming. Along with that the expectation of a larger yield than if the bees swarmed, but hardly a *greatly* increased surplus.

3. I cannot say about the disadvantages with others, but with me there was the disadvantage that sometimes the bees swarmed as soon as the queen was freed, even though no brood was in the hive, and many colonies were greatly reduced in numbers, with no young bees, and the combs clogged with pollen. Besides, I don't think I had an increase of surplus.

4. The queen could be confined in any kind of cage that could be brought in close contact with the brood-nest, and no bees are needed in the cage with her.

5. The Dovetail, but I am unsettled as to size, and am earnestly seeking light upon the question. If, in the darkness of Africa, you have any light upon it, please send a glimmer across the waters.

The Sweet Clover "Song."

Is not the song of sweet clover turned wonderfully in the last year? We could then still read, "Sweet clover is a bad weed." Now we read, "It is a very valuable weed."

What! No honey at Marengo? Just a few days ago I took from each of two different hives 48 well-filled sections—8-frame hives, at that; but many have not half that much. We have had much wet weather the last six weeks.

Garden City, Mo., July 22. G. J. Y.

ANSWER.—Yes, I think a change is taking place with regard to sweet clover. In two different counties where I have been this year, I have seen places along the road for a mile at a stretch where the sweet clover was kept eaten down by stock.

Swarms Leaving their Hives.

Why cannot I make the swarms of bees go into a hive? One large "gum" has sent out two swarms in two months. Each time I provided a clean hive, and to do away with all odors, rubbed it out with salt water and peach tree leaves. The bees hung about this new hive for a night and day, then left. Yesterday the second swarm came out, and I did as I have mentioned. The bees went into the hive, and I felt they would there take up their abode, but from some cause they came out, and went into the very same old gum they swarmed from. I would be grateful indeed if you would tell me why they act so, or what I have failed to do. I have only three or four colonies, and I dislike losing these new young swarms.

Waverly, Mo. MRS. S. Z. C.

ANSWER.—I hardly think the salt and peach leaves were the cause of the trouble, but at least I think they did no good. Perhaps the most frequent cause of swarms leaving a hive is heat. An old colony will stick to its brood even if uncomfortably hot, but a swarm newly hived is likely to say, "Look here; we're not going to stand this. We'll get right out and run the chance of finding a cooler place." So off they go. When a swarm returns to the old hive, it may be because for some reason there is no queen with them. Keep your hives well shaded and cool, with abundant entrance for fresh air, and you've done the right thing to have swarms stay.

Hives, Sections and Queen-Cells.

1. What size hive will 1⅞ sections fit best with T tins?

2. Have you tried sections with separators with ⅛ cleats on each side? How will they work?

3. What size hive will 1⅞ sections fit the best, larger than the 8-frame, with section-holders?

4. Will bees tear down queen-cells without a queen or presence of laying-workers? C. H. A.

ANSWERS.—1. Any size of section will fit any size of T super. That is one of the advantages of a T super. You can at any time change to a section of different width without changing your super.

2. Never tried them. I think some speak well of them.

3. If your frames are spaced 1⅜ from center to center, and you have the usual space for a dummy, your 8-frame hive will measure 12⅛ inside, and each frame added would add 1⅜ inches more. If your supers are the same width as your hives, you can have six holders over an 8-frame hive, and have plenty of room for a follower and wedge. Over a 9-frame hive you can have 7 holders, but it will be a pretty tight squeeze, and you can have no follower or wedge. Over a 10-frame hive you can have 7 holders with more room than is desirable for follower and wedge. Over an 11-frame hive you can have 8 holders with about the right space for follower and wedge. So if you want a hive larger than 8-frame, and want it for 1⅞ sections, the best thing will be an 11-frame hive.

4. Yes, indeed. Go to any hive and take away their queen and immediately give a queen-cell, and you'll probably have the pleasure of seeing them tear it down. After 24 hours, when they have become fully aware of their queenless condition, they will likely respect it. Still, they will sometimes take a notion to tear down any cell you give them, even after they have started queen-cells themselves.

Not All in the Kind of Hive.

I have several colonies of bees, and they are doing pretty well, with the exception of one which is the best I ever saw. I have taken three times as much surplus from it as from any other, all the same kind of bees. Is it on account of the hive, which is one of my own design? The style of hive is 8-frame, made for two supers of 24 sections each. E. C. C.

Tarentum, Pa., Aug. 2.

ANSWER.—No hive has ever been gotten up by which three times as much honey can be obtained as in the average run of hives. It probably never will be gotten up. The fact is, that the difference in hives is more for the convenience of the bee-keeper than for the benefit of the bees. Every now and then something happens in the way of a heavy yield to make the beginner think he has a hive that will give extra returns. The testimony seems quite clear. The bees were all the same, they had the same treatment, and there was no difference in any respect except in the hive. It's hard to believe that the hive was not the cause of the difference in the yield. But the very next year the thing may be reversed. The hive that gave the big yield does not come up to the average. More than once I've had cases in which one hive gave five times as much as another. So far as could be seen, the bees were the same, no difference to be seen in any respect, and the hives were precisely the same. Of course there is a difference somewhere, but to tell what the difference is, has remained a puzzle among observing men for many years.

Yellow Drones.

In your reply to S. L D., on page 457, you say that Italian drones are not yellow all over, and don't have distinct bands like the workers, but are inclined to a mottled appearance. Now, I am not a queen-breeder on an extensive scale, but I rear my own queens, and I think I can send you a queen that will produce drones that are yellow all over, and her bees are also good honey-gatherers, if there is any to gather, but they won't gather honey from prairie grass or hazel brush.

I had 16 colonies in the home yard this spring, and have increased to 34, by natural swarming, and have extracted 600 pounds of mint honey, and taken about 400 pounds of section honey, and there is that much on the hives yet, that is not quite finished, and the bees are now working on buck-bush with more vim than I remember to have ever seen before. I think they will finish those sections.

I send you by this mail a queen and a sample of what I call yellow drones. You can give this queen to Miss Wilson if you don't want it. J. C. B.

Bronson, Kans., July 26.

ANSWER.—The bees you send are beauties—queen and all—and what you say about them I have no desire to contradict. Suppose some one should ask me, "How many bands have Italian workers?" I think I should answer, "Three;" and yet the workers you send have more. When we talk about Italians, I suppose the bees such as come from Italy are meant, unless 5-banded, or something of the kind, is specified. I have drones that are nearly a solid yellow, and yet they haven't the distinct bands to be found on the workers. Even the workers you send, although among the most yellow I ever saw, have not as distinctly marked bands as original Italians.

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Editorial Budget.

Home Again.—After spending a pleasant week visiting relatives and friends in Ohio, I am back again in the office (Aug. 17). It is the first real vacation I have had in four years. Any correspondents who feel that I have been negligent recently, will now know the cause of any delay in replying to their letters or orders. Next week I hope to tell a little about my trip, which included one day with The A. I. Root Co., at Medina, Ohio.

Hon. Eugene Secor, of Forest City, Iowa, has kindly sent me a picture of a part of his neat apiary. It is in a shady grove, and looks as cool and collected as Bro. Secor himself, whom the picture shows as standing by one of the hives, ready for work, or to give a talk on bees. Were it not for the fact that the picture is somewhat dim, it would be shown herewith. For successful half-tone engraving, photographs must be very clear and distinct.

President Holtermann, of the North American, and others, are expecting a very large attendance at the Toronto meeting, Sept. 4, 5 and 6. I truly hope it may be so. Gleanings for Aug. 1 has this editorial paragraph on the subject:

There is every indication that the meeting of the next North American at Toronto will be an unusually large one; indeed, we always have good conventions over in Canada. It is thought there will be 300 or over in attendance, and half this is a fairly good number for the North American. Let the attendance, enthusiasm, and good-will be big—yes, very big.

Yes, by all means, let the "good-will" part be a prominent feature. But I don't suppose our Canadian friends would tolerate anything else, especially in Toronto—that city so famous for its quietness, cleanliness and goodness. We must all remember to take with us our "best behavior."

Sowing Alsike Clover.—Mr. Golden's plea, on page 534, is indeed timely. There is no doubt that nearly every farmer in this country would sow Alsike clover if he were shown its great value as forage for stock, and as a honey-yielder. He would be glad to purchase the seed himself, as it enriches in three ways—makes good hay, yields fine honey, and greatly benefits the land upon which it grows.

Before another spring is here, I will try to think to give an article in the Bee Journal on Alsike clover growing, with illustration, all of which will be suitable for republishing in your local newspapers. Also, you could possibly induce your farm papers to publish it. That would help immensely. I believe in using every possible agency to get proper and helpful information before the public. I think that occasional short articles on the use of honey should be furnished every local newspaper by bee-keepers. Take an interest in your home papers also, and then when you want their publishers to favor you by publishing an article on Alsike clover, or any other subject, they'll gladly do it.

Some Prominent Apiarian People are expected to be at the Toronto convention Sept. 4, 5 and 6. Among them may be named the following:

G. M. Doolittle, H. R. Boardman, A. I. Root, Capt. J. E. Hetherington, Treasurer J. T. Calvert, Hon. R. L. Taylor, Ernest R. Root, Vice-President L. D. Stilson, Thomas G. Newman, and others.

The Farmers' Advocate, published in Canada, says that "over 100 have already promised" to be present. It will be a good time to meet the Eastern members of the clan.

A special session of the Ontario Bee-Keepers' Association will be held in conjunction with the North American, so I understand. Better try to be there, if you can possibly do so.

Basswood and Drouth.—Mr. B. Taylor, of Forestville, Minn., has this to say about basswood, in the Aug. 1st number of the Farm, Stock and Home:

We, and many others in different States, reported and believed that the hard freezing late last spring had destroyed the basswood bloom. We now know we were mistaken, for many trees on the hills bloomed, and we have found several in bloom in low places where freezing was hardest. This proves that some other cause than frost curtailed the basswood bloom, which we now suspect to be the same that has nearly destroyed white clover in this section, viz.: the drouth of the last two years. The basswood trees have not the green, healthy, vigorous look of former seasons, and we know that many forest trees were at death's door last fall from lack of moisture. Truly, all things that have life are vitally interested in the sunshine and showers.

A Correction.—In the article by Mr. C. E. Mead, on page 488, in the ninth line from the bottom of the second column omit the word "not," and it will read as Mr. Mead wrote it, viz.: "I am as sure of wintering these small nuclei packed over the strong colonies as I am the big ones."

A Relic of the Battle of Antietam—a piece of a shell—has kindly been sent to me by Mr. L. A. Hammond, of Keedysville, Md., a bee-keeper whose farm is a part of the old battlefield. He says he can pick up any number of relics on that historic ground.

Ventura County, in California, has 4,215 colonies of bees, according to the assessors' reports. It would be interesting to know how much honey they stored this year.

Mineral Wool is something that has been suggested as good material for packing hives in winter. As probably quite a number do not know just what "mineral wool" is, and might be interested in it, I will give what the Age of Steel has to say in regard to it. It is an artificial product made from blast-furnace slag or certain melted rocks, by the action of a jet stream in which the liquid material is transformed into a fine fibrous or filamentous condition. In this state it closely resembles cotton-wool, hence its name. Among its most important properties are strength combined with lightness, resistance to transmission of heat, cold and sound. It is especially adapted as a lining between walls, floors, partitions, roofs, etc., in building construction, thus rendering a building to a greater degree fire-proof. In shutting out the rays of

snn in summer, the building is kept cool, while in winter the hot ascending air is retained, keeping the building warm. By deadening sound all communications and noises between offices are avoided.

As an inorganic substance, it does not decay or breed and harbor insects or vermin, as do earth, mortar, felt and sheathing papers when used as linings, a good property from a sanitary standpoint. It is especially adapted to cold storage and refrigerating houses, and has also been applied as a cover for water-pipes to prevent them from freezing. A more extended use of mineral wool seems very probable.

It might pay to test it more extensively for packing bees in winter. Possibly it could be used in place of straw by those who make straw hives.

The Nectar in Flowers, says W. W. Stoddard, of England, is simply a solution of cane-sugar formed and provided for the nutrition of the stamens and pistils. That may be only his "say so."

Among the Bee-Papers

Gleaned by Dr. Miller.

WEIGHT OF BEES.

According to figures in Gleanings, it seems pretty well established that when well filled, as when leaving with a swarm, bees weigh about 3,000 to the pound, and when emptied of honey about 5,000 to the pound. That shows that a bee can carry a load of honey equal to about two-thirds its own weight.

KEEPING SHARP THE UNCAPPING-KNIFE.

Here's how E. H. Schaeffle does it, as reported in Gleanings:

"He uses hot water, as many others do, into which to dip his knife. The water is used in a two-gallon stone crock. If the water is put in boiling hot, the crock will hold the heat for a long time. Select a crock upon the edges of which there is no enamel. If there is, file it off. Now, when the knife is removed from the crock, draw it across the edge of the crock as you would across a whet-stone, and the edge of the knife is kept as keen as a razor, which is no small item in uncapping."

ITALIANIZING AN APIARY.

Doolittle, after trying other plans, thinks that for the practical bee-keeper "the best plan is to give all the colonies which have good Italian queens, one or two frames of drone-comb, so that large numbers of drones will be reared in your own apiary, which will be very likely to secure the pure mating of one-half or more of your queens; and when one is found that is impurely mated, kill her and give the colony a queen-cell from your pure breeder, and try again. As your colonies increase, your drones will increase also; and the more drones reared in your Italian colonies, the better will be your chances of having all purely mated."

AMALGAMATION OF THE NORTH AMERICAN AND THE UNION.

The editor of Gleanings says:

"I must say, that, after looking over the whole situation, and studying it in all its bearings, I am in for supporting the amalgamation. I can't see *how* the workings of the Union would be hampered by being a part of the N. A. B. K. A., and the two organizations in one could be run much more economically.

"The truth of the the matter, it seems to me, lies right here: Bee-keepers cannot really afford two such organizations. Let the Union swallow up the North American, if need be; but let us boil them down into one; then let us have smaller initiation fees, conduct the one more economically, and run the membership up into the several hundreds.

"If I am not very much out of the way, the increased membership of the Union very recently was due to the fact that bee-keepers thought, after the Constitution was changed to take cognizance of adulteration and other matters, the Union would do something with this great problem of adulteration, and hence the new members. I do not quite agree that all the funds of the Union were raised for defense. The recent addition to membership brought with it an addition to the funds, and this was not so much for defense as for other matters.

"If we expect large membership, and a power for good, so that, as Bro. York says, we may appeal to legislatures that will *hear*, it is my humble opinion that the Union should *branch out* in its line of work. The field of protection against unjust legislation is *too narrow*. The Union ought to take hold and *investigate* every case of alleged adulteration. It has *seemed* disinclined to take any such action. Again, it should, I think, keep a careful watch of the markets and of commission men. It should also have a watch-dog eye on swindlers who do occasionally creep into our ranks, and have in the past succeeded in carrying off hard-earned dollars from bee-keepers. I am not referring to adulterators, but to unscrupulous queen-breeders and supply-dealers—more especially the former, who have taken in large orders and then pocketed the money.

"Last, but by no means least, it should and could fill the mission of the North American, in getting together the leading bee-keepers of the land for face-to-face and hand-to-hand conferences. It should grapple the great questions, and then with a large membership and a financial backing, be in a position to act and do something. The North American is not, and has not been, what it should be. The Union has had a brilliant past in the line of protection against unjust legislation. The need of such work is largely gone by, but there are newer and larger fields for action, and why not combine our two forces into one powerful one? Gleanings is for amalgamation, and, with the Review, it doesn't care whether the N. A. B. K. A. swallows the Union, or whether the swallowing is the other way. Let's combine our forces."

WHEN TO PUT ON THE ESCAPE.

C. R. Coe says in Gleanings that instead of putting on the escape at night, the proper time is early in the morning of the day the extracting is to be done. This gives the bees a chance to evaporate through the previous night the thin nectar present.

REARING QUEEN-CELLS THE OLD WAY.

For the first time in several years we have been enabled to fill almost all our orders for queens, from our own apiary. Our trade has not been less; but now that we have gone back to the good old-fashioned method of rearing queens, it is an actual fact that we can rear *more* queens than we could by fussing with the new-fangled plans.—Gleanings.

CRIMSON CLOVER.

A. I. Root says they are now selling crimson clover seed at the rate of a bushel or more a day. He further says:

There has been sufficient success, not only in Ohio, but even as far north as Michigan and York State, to warrant us in taking considerable pains to learn how to handle it. If it succeeds, you have a great lot of feed very early in the spring; and if you wish to enrich the ground for some future crop you have a great growth of clover to turn under. When it succeeds, this latter plan is probably the cheapest way of manuring your ground that has ever been devised. I say *manuring*, for a heavy growth of this clover, or, in fact, any clover, turned under just before planting your crop, is equivalent to a great many loads of the very best stable manure. Another thing, you do not get a great lot of weed seeds as where your manure is purchased.

The Palmer House, located at the corner of King and York streets, Toronto, will be the headquarters of the North American convention Sept. 4, 5 and 6. Mr. J. C. Palmer, the proprietor, writes me that he has made arrangements to accommodate 200 delegates. So you see there will be ample room for all. Where members "double up"—two in a bed—only $1.50 a day will be charged; $1.75 if you prefer to "bunk" alone.

Just across the street from the Palmer, is the Kensington, another hotel owned by Mr. Palmer. Here the rate is 50 cents and up for rooms, and meals are furnished on the European plan—pay for what you order.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

Cutting Out Drone-Comb—Preventing Robbing.

DR. BROWN :—In replying to J. J. W.'s question (When a queen-excluder is used, and brood-frames in the upper story, would you cut out all the drone-comb?) you say: "I would cut it out."

1. The answer is not explicit, or why would you cut it out of the upper story? That is, would you cut it out of the upper story?

2. How would you prevent robbing? P. A.

Evans, Ky.

ANSWERS.—1. It is not *absolutely* necessary to cut it out, but in order to secure the best results, and to conduct apiary work to the best advantage, it is wise and best not only to have frames of the same size, so as to be interchangeable, but to have them filled with straight *worker*-comb. When discussing the natural history of the drone-bee, a few apiarists have ascribed to it several minor functions, aside from that of fertilization of the queen, but this latter is unquestionably the object of its being. God did not endow it with the desire nor capacity to work as a gatherer in the fields. It is a consumer, and a greedy one, of the proceeds of the industrious little worker. A hive with two or three frames of select drones will be sufficient to furnish all the males for a large apiary. More than this is a waste of honey, labor and time.

2. If there is any truth in the old adage, that "an ounce of prevention is worth a pound of cure," the full force of it comes in when applied to this question. When bees are gathering plenty of honey they seldom show any desire to rob; but when forage is scarce they can, by a very little imprudence, or want of care on the part of their keeper, imbibe in this vice, and give no end to trouble. At such seasons, to be on the safe side, only open hives late in the evening, and always cover the exposed frames with a cloth, and keep the hive open no longer than necessary. Avoid the exposure of all bits of comb and honey—of all sweets that will attract the bees. If feeding is necessary, do it after sundown, and place the feed inside the hive. It is not always the poorest colony robbing the richer one, but more frequently it is the strong colonies robbing the weaker ones.

Robber bees can always be distinguished from those that have been out honestly foraging, by the peculiar manner in which they approach a hive. Like sneak-thieves, they go cautiously with their heads toward the hive, looking for a hole to enter. They will alight at the entrance, and then dart back as if afraid to enter, particularly if there are guards stationed there. But if the entrance is not securely guarded, they will finally pass in, and when once loaded with stolen honey, they will pass out and make for their own honey. The bees belonging to the hive would *come* in loaded and *not go out* loaded.

The colony attacked at first may show some resistance, but as the number of robber-bees increase, they give up, and frequently join the robber force to the destruction of the colony. You cannot well arrest the evil until you know the hive from which the robbers come. Such bees are out early in the morning before their honest neighbors stir, and are at work in the evening after their neighbors are quietly at home. To be certain, sprinkle some flour on the bees passing out of the attacked hive, and have assistants to watch the entrance of the suspected hives, and the white-coated thieves can be seen entering their hives. When you have found them, smoke them thoroughly in order to alarm them, and to check, for the time being, their outside operations, and to impart to them the odor of smoke, which will be distasteful to the inmates of the attacked hive. Contract the entrance to the robber hive so that only one bee can pass at a time, and set up weeds, grass, small brush, or boards, in front to obstruct the passage-way. Robber bees dislike winding entrance-ways. Tap a little now and then on the hive to anger the bees, and to get them into fighting trim; but sometimes they become so discouraged that they lose all desire to defend their home. They nearly always become thus when the robbers have taken all their stores. The only remedy in such cases is to close up the entrance to the weak hive with wire-cloth, and carry it into a cool, dark room, like a cellar; feed; allow it to remain 48 hours, and then remove it to a new stand, taking the precaution to protect the entrance as previously directed. If the hive is still robbed, you had better unite the bees with the dishonest colony.

In cases where the robbers would attack in force, I have found it of great advantage to spray them well with a fountain pump. Kerosene, creosote, carbolic acid, etc., sprinkled about the entrance and hives of robbers will often result in checking their depredations. The object of these preparations is to give them a disagreeable scent, and to make them obnoxious to good, honest bees.

Bee-Talk for Beginners—Honey.

Honey is a sweet substance secreted by the nectaries of flowers. It is also secreted in small quantities by little glandular organs on certain plants, as the cow-pea. It is taken up by the proboscis of the bee, and deposited in a special pouch called the honey-sac, and conveyed to the hive. It is possible that the insect imparts to it some little acid; but honey is *not digested* nectar, as some writers contend. The function of the honey-sac is only that of a receptacle, and not an organ of digestion. The odor, flavor, and qualities of it depend upon the source from which it is gathered. Thus the famous honey of Hymettus has its thyme odor and flavor; the horsemint honey has its distinguishing qualities; the honey of the heather has its peculiarities; the sage, the poplar, the basswood, the clover, etc., have all their characteristics. When selecting honey for medicinal purposes, it might be well to consider the properties of the plant from which it is gathered.

When natural forage is scarce, bees will gather sweets from many sources. They will collect the excretion of the aphis, the waste of cider-mills, cane-mills, melon-juice, fruit-juice, and the refuse of molasses and sugar barrels, etc. But none of such stuff can truly be called honey. Bee-keepers have been charged with feeding their bees glucose, sugar, etc., for the object of the insects storing it in the surplus department to be sold for genuine honey. But such charges cannot well be sustained. In fact, for a bee-keeper to purchase glucose, etc., to feed to his bees with the expectation of their depositing it as surplus honey to be sold at the price of the pure article, would be to incur a loss in dollars and cents. This has repeatedly been tried.

In some seasons, when honey is scarce in the flowers, bees will work on fruit; but it is only when put to great straits for food that they will attack sound fruit. When the skin of grapes, peaches, figs, etc., become punctured, or cut by wasps, yellow jackets, birds, etc., they will proceed to suck the juice. But as all such cracked fruit is unsalable, they do comparatively little harm. Here it should be remembered that the bee is the friend of the agriculturist, for if it were not for these insects, the fertilizing element of many male flowers would fail to reach the pistils of the female, and consequently the plant would produce neither seeds nor fruit.

☞ See "Bee-Keeper's Guide" offer on page 545.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Strawberry Pollination.—"Can you raise a crop of Crescent strawberries with no staminate blossoms within a mile?"—Dr. Miller, on page 454.

Say, Doctor, I will let you and Mr. Jelley settle your strawberry disputes, but I want to suggest that it is a little dangerous to tackle these botanical questions unless you are keeping yourself well read up on the subject. It is not absolutely necessary that fertilization shall take place in order that fruit may be produced, and you were peculiarly unfortunate in mentioning the "Crescent," as you will see by the following:

"Certain so-called pistillate varieties—notably the Crescent—at times mature fruit and apparently perfect seeds in the absence of any perfect flowering variety."—Prof. W. M. Munson, of the Maine Experiment Station.

This may seem startling, but he says further: "One grower of my acquaintance uses no perfect-flowering variety, and succeeds admirably."

Not only strawberries, but pears and other fruit are produced without fertilization. Often pollination takes place without the ovules being impregnated. Pollination seems to act in two ways—in one case it impregnates the ovules, and in the other it acts directly on the fruit, stimulating its growth. The latter frequently occurs without having any effect on the ovules. Hence, such fruit as strawberries and pears may seem to be perfectly developed, but the seed—the real fruit in the strawberry—will be imperfect.

Special Agent Waite demonstrated by a series of experiments that in all cases where the ovules of the pear were not impregnated, the fruit, though seemingly perfect, was not as large and as well developed as it was where the act of impregnation had taken place. The facts stated above should not be lost sight of in the discussion of this subject. Let me quote further from Prof. Munson, as confirming my position:

"The fact seems well established that in certain species the ovary may develop and reach normal size without the corresponding impregnation of the ovules, and even in the entire absence of the male element. What the conditions are which induce this apparently abnormal condition, is not fully determined. It is evident, however, that vigorous growth of the parent plant is of first importance."

I want to call special attention to a statement of Prof. M.'s in the first quotation. You will notice that he says, "and apparently perfect seeds." I am glad that he said "apparently," for I am pretty thoroughly convinced that no seed will be produced, if the act of impregnation does not take place.

I feel quite sure that there is yet much to learn about the influence of pollen in the development of fruit. I have said more than once that it is not a question of the mere production of fruit, but a question of perfect fruit—perfect fruit not only for one year, but for all time to come. It may prove to be true that lack of perfect impregnation for a long series of years will cause the plant to degenerate. In that case it is not a question of one crop, but of the best possible crop for years. This fact makes all that I have said on the subject harmonize with the above—*not fruit alone, but* PERFECT *fruit for all time to come is the mission of the bees in orchard and berry-patch.*

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

The North American at Toronto.—Although all the program for the meeting of the North American Bee-Keepers' Association at Toronto is not quite ready to announce, Secretary Hutchinson has sent me the following in regard to transportation and hotel arrangements for those attending the convention at Toronto, Sept. 4, 5, and 6:

The North American will hold its annual convention in the auditorium of the Normal School, at Toronto, Ont., Canada, on Sept. 4, 5, and 6, the first session being on the evening of the 4th.

The Trunk Line Association and the Central Traffic Association have both given reduced rates—a fare and one-third. Persons going will buy a ticket paying full fare going, and get a Certificate from their station agent. If a ticket Certificate cannot be obtained because your starting-point is a small place, then buy a ticket to the nearest large town where a Certificate may be obtained. It might be well to inquire of the agent a few days beforehand, and thus learn if he has any Certificates, and the point where one can be obtained if he has none.

If 100 persons are present who have come on some legitimate form of railroad transportation, all who have Certificates, and have paid as much as 75 cents fare going, will be sold tickets for the return trip at one-third fare. In Canada and Michigan, and in other States, perhaps (but of this I do not know), round trip ticket can be bought for but a single fare. This, of course, will be better than the certificate plan. Perhaps many living a short distance beyond where excursion rates are given, will find it cheaper to buy a regular ticket to the nearest point where excursion rates prevail, but those coming long distances will probably find the Certificate plan the best. Each one must look up these matters in advance and decide for himself which is the best for him.

The Trunk Line Association covers the roads from Niagara Falls, Buffalo, Salamanac, N. Y., Pittsburg, Pa., Bellaire, Ohio, Weeling, Parkersburg, and Charleston, W. Va., and points east thereof *except* New England. I hope to get reductions from New England. The Central Traffic Association covers the territory west of Buffalo and Pittsburg to Chicago, and St. Louis on the west, and the Ohio river on the south.

Tickets must be bought not earlier than three days previous to the meeting, and return tickets bought not later than three days after the meeting.

The headquarters at Toronto will probably be at the Palmer House, corner of King and York streets. This is $2.00 a day house, but if members will double up, two in a bed, the price will be only $1.50 a day. If separate beds are wanted, it will be $1.75. Remember this is during the Industrial Fair, when no reductions at all ought to be expected. The street cars pass the hotel, and they can be taken within a block of the Normal School, where the convention is to be held.

While the program is not yet complete, the following can be announced:

Thomas G. Newman, Chicago, Ills.—The Bee-Keepers' Union: Its Past, Present, and Future.

Dr. C. C. Miller, Marengo, Ill.—Amalgamation of the North American Bee-Keepers' Association and the Bee-Keepers' Union.

Hon. John Dryden, Minister of Agriculture, Toronto, Canada—Address of Welcome, Etc.

A short address by Jas. Mills, M.A., L.L.D., President of the Ontario Agricultural College, Guelph, Canada.

S. T. Pettit, Belmont, Ont.—Introducing Queens.

Ernest R. Root, Medina, Ohio—Bee-Paralysis: What We Know and Should Do About It.

Allen Pringle, Selby, Ont.—Mistakes of Bee-Papers and Bee-Journals.

H. R. Boardman, East Townsend, Ohio—How to Feed Bees Profitably.

Hon. R. L. Taylor, Lapeer, Mich.—How Bee-Keepers Might Receive More Benefit from the Experiment Stations.

F. A. Gemmill, Stratford, Ont.—Who Shall Winter Bees Out-of-Doors; Who in the Cellar?

Dr. J. P. H. Brown, Augusta, Ga.—What is Indicated by Color in Italian Bees?

James Heddon, Dowagiac, Mich.—The Proper Size of a Brood-Nest, and How It Shall be Decided.

B. Taylor, Forestville, Minn.—The Surest and Best Way of Producing a Crop of Comb Honey.

G. M. Doolittle, Borodino, N. Y.—Some Things of Interest to Bee-Keepers.

R. McKnight, Owen Sound, Ont.—Legislation for Bee-Keepers.

Flint, Mich. W. Z. HUTCHINSON, *Sec.*

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BEE-BOOKS

SENT POSTPAID BY

George W. York & Co.,

Chicago, Ills.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains 250 pages, and 245 illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, $1.00.

Langstroth on the Honey-Bee, revised by Dadant—This classic in bee-culture, has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages; bound in cloth. Price, $1.40.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof A. J Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delinention of the anatomy and physiology of bees. 480 pages; bound in cloth and fully illustrated. Price.

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of Queen-Bees are reared in perfect accord with Nature's way. 176 pages, bound in cloth, and illustrated. Price. $1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopædia of 400 pages, describing everything pertaining to the care of the honey-bees. It contains 300 engravings. It was written especially for beginners Bound in cloth. Price, $1.25.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is too well known to need further description of his book. He is a practical and entertaining writer. You should read his book. 90 pages, bound in paper, and illustrated. Price, 50 cts.

Rational Bee-Keeping, by Dr. John Dzierzon—This is a translation of his latest German book on bee-culture. It has 350 pages; bound in cloth, $1.25; in paper covers, $1.00

Bienen-Kultur, by Thomas G. Newman.—This is a German translation of the principal portion of the book called BEES OF HONEY. 100 page pamphlet. Price, 40 cents.

Convention Hand-Book, for Bee-Keepers, Thomas G. Newman.—It contains the parliamentary law and rules of order for Bee-Conventions—also Constitution and By-Laws, with subjects for discussion, etc. Cloth, gold-lettered. Price, 25 cts.

Amerikanische Bienenzucht, by Hans Buschbaner.—Printed in German. A hand-book on bee-keeping, giving the methods in use by the best American and German apiarists. Illustrated; 138 pages. Price, $1.00.

Thirty Years Among the Bees, by Henry Alley.—Gives the results of over a quarter-centnry's experience in rearing queen-bees. Very latest work of the kind. Nearly 100 pages. Price, 50c.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cts.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. Price, 10 cts.

Foul Brood, by A. R. Kohnke.—Origin. Development and Cure. Price, 25 cts.

Honey as Food and Medicine, by T. G. Newman.—A 32-page pamphlet: just the thing to create a demand for honey at home. Should be scattered freely. Contains recipes for Honey-Cakes, Cookies, Puddings, Foam, Wines, and uses of honey for medicine.

Prices, prepaid—Single copy, 5 cts.; 10 copies, 35 cts.; 50 for $1.50; 100 for $2.50; 250 for $5.50; 500 for $10.00; or 1000 for $15.00.

When 250 or more are ordered, we will print the bee-keeper's card (free of cost) on the front cover page.

Emerson Binders, made especially for the BEE JOURNAL, are convenient for preserving each number as fast as received. Not mailable to Canada. Price, 75 cts.

Preparation of Honey for the Market, including the production and care of comb and extracted honey. A chapter from BEES AND HONEY. Price, 10 cents.

Bee-Pasturage a Necessity.—This book suggests what and how to plan it is a chapter from BEES AND HONEY. Price, 10 cents.

Swarming, Dividing and Feeding.—Hints to beginners in apiculture. A chapter from BEES AND HONEY. Price, 5 cents.

Bees in Winter, Chaff-Packing, Bee Houses and Cellars. This is a chapter from BEES AND HONEY. Price, 5 cents.

The Hive I Use, by G. M. Doolittle. It details his management of bees, and methods of producing comb honey. Price, 5 cents.

Commercial Calculator, by C. Ropp—A ready Calculator, Business Arithmetic and Account-Book combined in one. Every farmer and business man should have it. No. 1, bound in water proof leatherette, calf finish. Price, 40 cts. No. 2 in fine artificial leather, with pocket, silicate slate, and account-book. Price, 60 cts.

Green's Six Books on Fruit-Culture, by Chas. A. Green.—Devoted 1st, to Apple and Pear Culture; 2nd, Plum and Cherry Culture; 3rd, Raspberry and Blackberry Culture; 4th, Grape Culture; 5th, Strawberry Culture. 129 pp., illustrated. 25 cts.

Garden and Orchard, by Chas. A. Green.—Gives full instructions in Thinning and Marketing Fruits; Pruning, Planting and Cultivating; Spraying, Evaporation, Cold Storage, Etc. 94 pages, illustrated. Price, 25 cts.

Capons and Caponizing, by Dr. Sawyer, Fanny Field, and others.—Illustrated. All about caponizing fowls, and thus how to make the most money in poultry-raising. 64 pages. Price, 30 cts.

How to Propagate and Grow Fruit, by Chas. A. Green.—Brief instructions in budding, grafting and layering; also propagation of fruit trees, vines and plants. 72 pages. Price 25 cts

How We Made the Old Farm Pay, by Chas. A. Green.—Gives his personal experience on a fruit farm which he made yield a generous fortune. 64 pages, illustrated. Price, 25 cts.

Our Poultry Doctor, or Health in the Poultry Yard and How to Cure Sick Fowls, by Fanny Field.—Everything about Poultry Diseases and their Cure. 64 pages. Price, 30 cts.

Poultry for Market and Poultry for Profit, by Fanny Field.—Tells everything about the Poultry Business. 64 pages. Price, 25 cts.

Turkeys for Market and Turkeys for Profit, by Fanny Field.—All about Turkey-Raising. 64 pages. Price, 25 cts.

Book Clubbing Offers.

The following clubbing prices include the American Bee Journal one year with each book named. Remember, that only ONE book can be taken in each case with the Bee Journal a year at the prices named. If more books are wanted see postpaid prices given with the description of the books on this page. Following is the clubbing-list:

1.	Langstroth on the Honey-Bee	$2.10
2.	A B C of Bee-Culture	2.00
3.	Bee-Keeper's Guide	1.75
4.	Bees and Honey [Cloth bound]	1.65
5.	Scientific Queen-Rearing	1 65
6.	Dr. Howard's Foul Brood Book	1.10
7.	Advanced Bee-Culture	1.30
8.	Amerikanische Bienenzucht [Germ.]	1.75
9.	Bienen-Kultur [German]	1.25
10.	Rational Bee-Keeping [Cloth bound]	2.00
11.	Rational Bee-Keeping [Paper bound]	1.75
12.	Thirty Years Among the Bees	1.30
13.	Bee-Keeping for Profit	1.15
14.	Convention Hand Book	1.15
15.	Poultry for Market and Profit	1.10
16.	Turkeys for Market and Profit	1.10
17.	Capons and Caponizing	1.10
18.	Our Poultry Doctor	1.10
19.	How We Made the Old Farm Pay	1 15
20.	Green's Six Books on Fruit-Culture	1.15
21.	Garden and Orchard	1.15
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25.	Commercial Calculator, No. 1	1.25
26.	Commercial Calculator, No. 2	1.40

General Items.

Fair Prospects for Fall Honey.

The July rains have brought forth vegetation in the greatest luxuriance, and there is fair prospects for a fall flow of honey.

Bees commenced swarming Aug. 1, and are continuing at a lively rate.

MRS. L. HARRISON.

Peoria, Ill., Aug. 2.

Bee-Sting Antidote.

The article on page 430, "A Consideration of Bee-Stings," is pretty good, but the sting of bees hurts me, and especially if I haven't my preventive close at hand, viz.: Make a strong tincture of lobelia seed. The minute a bee stings me, I apply a little of the tincture on the place stung. It destroys the poison, no swelling results, and the pain generally amounts to nothing. This is a positive safe-guard against the bad effects of being stung. ED. S. POPE.

Indianapolis, Ind.

Blue Vervain.

I send a flower that I wish to know the name of. It is a good honey-plant, and blooms about July 25. It is just swarming with bees to-day (Aug. 5). I intend to keep watch of it, and see when it ceases to bloom.

Luce, Mich., Aug. 5. WM. CRAIG.

[This plant is the blue vervain (*Verbena hastata*) usually very common in waste-places and in neglected pastures. It is often accredited as a good honey-plant.—T. J. BURRILL.]

Bees in a House-Apiary.

I have 30 colonies of bees in a building built after the plan of H. P. Langdon's, of New York. I use the Langstroth frame, and the bees are doing extremely well. After-swarming need not occur at all in such a building.

Later I may give my experience and results with bees kept out-doors and those kept inside. S. E. ROOD.

Fertile, Iowa, July 31.

[Mr. Rood is hereby requested to tell his experience as indicated above, for the benefit of the Bee Journal readers.—ED.]

Starting in Bee-Keeping—Uniting.

In the summer of 1893 I caught a swarm of bees and put them into an 8-frame hive, and I now have 12 strong colonies. I have never had any bee-book, nor taken a paper; in fact, I have never seen a bee-paper that was worth reading until I had a copy of the American Bee Journal handed me. I have found experience a great teacher, and as my stock cost me comparatively nothing, I have experimented quite a little.

I would like to tell how I united two weak colonies at a good advantage. About June 1 I had a colony that had swarmed three times, and although weak, it had a good laying queen. This colony I will call No. 1. The colony in the hive next to it (about 5 feet away) had swarmed, and although the queen had failed to return from her bridal

tour, the colony was fairly strong; this I will call No. 2.

I knew that one strong colony was worth two weak ones, but how to unite them was a question with me. I moved hive No. 1 to within one foot of hive No. 2. I then moved No. 2 away about 20 feet, and taking each frame I shook and brushed all the bees off on the alighting-board of No. 1; they readily entered (by giving a little smoke), also the returning bees from both hives, that were in the field. Before I had finished the job, a large swarm issued from another hive, and clustered on a brush near by. I at once hived them in No. 2, all filled with brood-combs, and the result is two strong colonies filling surplus sections with white clover honey, which is found here in abundance. J. E. TAYLOR.

Orleans, Mass., July 22.

Old Subscriber—Doing Fairly Well.

I have been taking the American Bee Journal since Geo. Wagner edited it in Washington, D. C., and I have ever found, and still find, it full of interest to bee-keepers. There are many things in every issue that are helpful and full of suggestions to me.

The bees in this part of the country are doing fairly well this year.

Liberty, Ind., Aug. 3. JOHN CLARK.

Too Much Rain.

The season this way has been a hard one—too much rain. It started in well, but cold rains, long continued, spoiled it. I think the fall flowers will build up well for winter.

I have experimented a little in queens for my own pleasure this season, and have learned one or two things that may be of advantage. J. E. POND.

North Attleboro, Mass., Aug. 6.

Battle of the Humble-Bee.

A short time ago as I was watching my honey-bees carry into their hives pollen and honey, a large humble-bee, attracted by the fragrant smell of new honey, came buzzing around the hives; it buzzed from entrance to entrance of different hives, but as each was well guarded by the honey-bees, they would dart at it whenever it attempted to alight. It was loth, apparently, to make the attempt. However, the smell of the gathered sweets was too much for it, and its appetite got the better of its fears, and it alighted at the entrance of one of the hives. No sooner done than two bees were on its back and wings—one on each side; and as it raised to throw them off, a third bee attacked it squarely in the breast, and over all went to the ground.

I watched the struggle as they fought, the bees hanging onto it and thrusting their stings into it the best they could, while it, with comparatively giant strength, tore them away. The contest lasted perhaps one quarter of a minute, when it cleared itself from the honey-bees, leaving the three adversaries exhausted and wounded on the ground; it flew perhaps six feet and rested on a stone. I watched it as it

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TESTIMONIAL.

WILLOW GROVE, Del., July 16, 1895.
MR. H. ALLEY: The best queen I have came from you. The colony has stored 110 pounds comb honey from fruit bloom and crimson clover. White clover is a complete failure. J. COLBY SMITH.

HENRY ALLEY,
34Atf WENHAM, MASS.
Mention the American Bee Journal.

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1895 SAVE MONEY 1895

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J. P. H. BROWN, AUGUSTA, —GA—
Mention the American Bee Journal.

panted and dressed its wounds and wings. It rested for a minute or two, and started to fly, then rested again. Maddened as it was by its defeat, it started again and went direct to the entrance of the hive. It tried to enter without stopping, but its reception was very warm and pointed! It was attacked from all sides at once, and they all rolled to the ground in a bunch. The struggle lasted two or three seconds, when the humble-bee tore the bees from it (like the giant it was), and took its departure at once, a wiser if not a more humble humble-bee. J. L. BOWDISH.

Wichita, Kans., July 29.

Carniolan-Italian Hybrids, Etc.

I have tested the blacks, Italians, Punics, Italian and black hybrids, the Carniolans, and Carniolan Italian hybrids. The last are the bees for me. It is true they are quite given to swarming, but they are hardy, winter well, are gentle, good comb-builders, build up early in the spring, and will go to work in sections when the Italians will lay up and try to steal what the others gather.

I am thinking of trying a few 9 or 10 frame hives, if 1⅞ sections will work to suit. I think it will check swarming a little, although they are not bad, but from choice I prefer they would not swarm at all.

My bees stored an average of 63 complete 14-ounce sections of honey per colony, 14 ounces each, spring count, and doubled in increase. I lost 6 per cent. in wintering last winter, but they all came out weak in the spring. What I lost died from the effects of dysentery; they were all affected.

Allen, Mich., July 12. C. H. AUSTIN.

Phacelia.

I send you by mail a package containing specimens of a plant in the different stages of its growth, and wish to know what it is, and what it is good for. It is a plant that came up from a paper of mixed seeds, and I do not know any name for it. I call it "the bee-plant," because the bees work on it so constantly. I planted it a year ago last spring with other seed, and one plant of that kind came up, and from the time it commenced to blossom until the frost killed it, the bees worked busily on it. I sowed the seed, and this year have a bed of it about equal to 10 feet square, and the bees are almost eating it up.

H. P. WILLSON.

Bathgate, N. Dak., July 29.

[This plant is *Phacelia congesta*, often known simply as phacelia. It has often been commended as a honey-plant, and seems to merit its good reputation. It originally came from Texas.—T. J. BURRILL.]

Fatal Effect of a Bee-Sting.

Do you know that bee-stings sometimes prove fatal? I never thought so, but I was informed by a reliable man, a few days ago, of the case of Harry Ayers, who died from the effects of the sting of a single bee, and in the remarkably short time of five minutes. As I thought the case a rather peculiar one, I took the names and address of the physicians that examined the man soon after he died. They were Drs. Cole-

QUEENS!

Now ready by return mail, reared in full colonies from the best honey-gathering strains in America, at the following very low prices:

Tested	each $1.50
" per ½ dozen.....	8.00
Warranted purely-mated	each .75
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Friends, I will have 200 Select Tested Queens for sale Sept. 1 at $1.00 each or $10.00 per dozen. Untested, 50 cents each, or $5.00 per dozen. Tested Queens 75 cents each, or $6 00 per dozen. Other Golden Italians or Imported stock at same price. Safe arrival and satisfaction guaranteed. Address.

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I will send a Guaranteed 5-Banded Yellow Queen, bred from a Breeder selected from 1000 Queens (some producing over 400 lbs. of honey to the colony); or a 3-Banded Italian Leather-Colored Queen direct from a Breeder imported from Italy, Oct. '94—**at 75c.**, and a special low price for a quantity.

My secret is to sell an extra-large amount, which enables me to sell at low prices. Will run this spring 350 Nuclei—have 1 home and 4 out apiaries. No Queens superior to my Strain.

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Convention Notices.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association in Fort Scott, Kans., on Sept. 19, 1895. All are cordially invited to come and have a good time. There will be a full program.
Bronson, Kans J. C. BALCH, Sec.

WISCONSIN.—The Southwestern Wisconsin Bee Keepers' Association will hold its next meeting at Platteville, Wis., Oct 8 and 9, 1895. "Come, every one." Don't get discouraged if we haven't got a crop of honey. We will have a good time at Platteville, just the same Bring your wives and daughters with you Many interesting subjects will be discussed. M. M. RICE, Sec.
Bo-o-bel, Wis.

LAST CALL!

Golden Italian Queens.

August and September, 60 cts.; Oct., 75c.

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Another Wonderful Cure.

Ever since my "calfhood" I had been in trouble, inherited a tendency to "breaking out." After a severe attack I have often been confined to the stable for weeks. Also troubled with a ringing sensation in my nose, and a feeling as if stuck with pitchforks by angry men. I was threatened with "Bologna treatment," but a friend recommended Electricity as compounded by the Page Woven Wire Fence Co., Adrian, Mich. One dose worked a complete cure, and I can freely recommend it in similar cases.
Yours truly, Durham Bull.

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Note—50 cts. each.

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Mention the American Bee Journal 34A4t

READERS of this Journal who write to any of our advertisers, either in ordering, or asking about the Goods offered, will please state that they saw the Advertisement in this paper.

man and McCollum, both of Cresco, Howard Co., Iowa. They reported that they could find no other cause of death but the sting of the bee, which they found to be on one of the large blood vessels of the man's neck. This is rather an old story, as it happened in 1867, but if it was true then, it is just as true to-day. Now, if any of the readers of the Bee Journal (or any other man) ever knew of a similar case, I should like to have them report, as to whether the bee is capable of taking the life of the apiarist. If it be so, we ought to know it.

Colfax, Iowa. C. E. WOODWORTH.

[Although personally I never saw a case like the one mentioned by Mr. W., still I have no doubt of its being a fact. I have heard of people being kicked to death by horses, and fatally hooked by cattle; some have died from being bitten by poisonous snakes. But all such cases are quite rare. If I remember correctly, a young lady in Canada died only a few years ago, from the effects of a bee-sting on the temple. I think it pays to wear a good veil when handling bees, and take no chances.—ED.]

A Report from Washington.

My crop for 1895 is 2,200 pounds of comb honey from 42 colonies, spring count, and increased to 74 colonies. My home apiary was allowed to swarm, as I had not time to control them, but at my out-apiary only a few colonies swarmed, and they were in the Dadant hive. The sectional brood-chamber hive is my choice. The more I use it the better I like it, as every necessary manipulation is so easily done, and with very little work compared to hanging frames. I have made 200 of them, and shall get my bees into them as soon as convenient.

I have no difficulty at all to dispose of my own honey at fair prices—12 to 17 cents for comb honey, and 8 to 15 cents for extracted.

My first swarm came off on May 25, and the last on July 6. The honey-flow lasted about five weeks, principally from white clover; this season the honey is very thick, and candies in a few days.

G. D. LITTOOY.

Tacoma, Wash., July 29.

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From a $50.00 Breeder obtained of Doolittle. Also **Leather Colored** from one of A. I. Root's very best Imported Queens. Price—1 Queen, 50c; 6 for $2.75; $5.00 per dozen. Will warrant 95% of Queens purely mated; Bees to be gentle and excellent honey gatherers. **H. G. QUIRIN,**
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Honey & Beeswax Market Quotations.

ALBANY, N. Y., Aug. 19.—The honey market is now beginning, and I think this the best time to sell, especially white grades of comb honey. Receipts so far are light. We quote: White comb, 14@15c.; mixed, 12@14c. Extracted, white, 7@7½c.; mixed, 6@6½c.; buckwheat and dark, 5½@6c.
H. R. W.

CHICAGO, ILL., July 30.—We are now having some inquiries for comb honey, and expect our first receipts of fancy white to sell at 15c.; No. 1 white will bring 14c; no trouble to sell fancy honey; No. 2 quality sells at 10@13c., depending upon condition. White extracted, 6@7c., depending upon flavor; dark, 5@6c. S. T. F. & Co.

CHICAGO, ILL., Aug. 7.—Some of the new crop of comb honey has come on the market, and we have sold same at 15c. There is also sale for the darker grades at 8@12c. Extracted, 5@7c., according to quality, flavor and color. Beeswax, 25@27c. R. A. B. & Co.

CINCINNATI, O., Aug. 7.—Demand is lively for new extracted and comb honey, all old honey being closed out. Arrivals are fair but insufficient for the demand. Comb honey brings 14@15c. for choice white. Extracted, 4@7c.

Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, MO., Aug. 8.—The receipts of new comb honey are light. Demand is fair. We quote: Comb, No. 1 white, 1-lbs., 14@15c.; No. 2, 12@13c; No. 1 amber, 12@13c.; No. 2, 10c. Extracted, white, 6@6½c.; amber, 5½@6c.; dark, 4@4½c.
Beeswax, 20@25c. C. C. C. & Co.

PHILADELPHIA, PA., June 18.—The new crop of comb honey is arriving slowly, and is in fair demand. No new extracted honey has arrived in this market as yet. We quote: Comb honey, 9@13c. Extracted, 4½@6c.

Beeswax is still declining. The adulteration of bee-wax has demoralized our market this spring, and has hurt our sales considerable. Price, 25@27c. W. A. S.

NEW YORK, N. Y., July 6.—The market is about bare of comb honey and there is no demand at the present. The market is quiet on extracted. Demand is limited, with plenty of supply arriving to meet the demands and more. We quote: California, 6@6½c; Southern, choice, 60@65c. per gallon; common, 50@55c. per gallon. Beeswax is declining and selling at from 29@30c. at present, but the indications are that the price will decline still further. H. B. & S.

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R. A. BURNETT & Co., 163 South Water Street.

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F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 120 & 122 West Broadway.
CHAS. ISRAEL & BROS., 486 Canal St.
I. J. STRINGHAM, 105 Park Place.

Kansas City, Mo.

C. C. CLEMONS & Co., 423 Walnut St.

Buffalo, N. Y.

BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.

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I ARISE

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has concluded to sell —BEES and QUEENS— in their season, during 1895, at the following prices:

One Colony of Italians on 9 Gallup frames, in light shipping-box	$7 00
Five Colonies.....	30 00
Ten Colonies.....	50 00
1 untested queen.	1 00
6 " queens	5 50
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3 " Queens.	4 00
1 select tested queen	2 00
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Select tested queen, previous season's rearing 4 00
Extra Selected for breeding, THE VERY BEST.. 6 00
About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.

—o—

☞ Circular free, giving full particulars regarding the Bees and each class of Queens.
Address

G. M. DOOLITTLE,

12A25t BORODINO, Onon. Co., N. Y.

HONEY QUEENS!

Have been carefully bred for producing comb honey for the past 18 years, and by a special method for producing large, long-lived, prolific Queens. Can furnish either 3 or 5 Banded stock, bred in separate yards. 3-Banded bred from my own or imported Mother. No foul brood or paralysis. Warranted Queens, purely mated, 60 cts.; Tested, $1.00; Selected Breeders, $2.50. Discount on quantities.

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Free Silver is a good thing but here's something better For You

Until further notice I will furnish **COMB FOUNDATION** as follows:

10 lbs. Heavy or Medium Brood Fdn.	$3.50
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No orders will be accepted at these prices from persons living east of New York State.

For BEESWAX—fair quality, delivered here, 27c. cash; 29c. in trade.

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28A13 *Mention the American Bee Journal.*

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In response to many inquiries I will renew my special offer for a short time only:—

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A LETTER

From A. Norton, of Monterey, Calif., reads as follows:

"The Queen that you sent me arrived in fine condition in 12 days from the time that I ordered her. (It takes 6 days for mail to go from here to Calif.) Twelve hours later she was introduced, and in 12 more was laying. I thank you for your promptness and for the beauty, size and excellence of the Queen."

From neighboring States I frequently get reports of Queens being received and INTRODUCED within 3 days from the time the order was sent. I not only advertise to send Queens by RETURN MAIL, but I DO do it; and I sell tested Queens of this year's rearing for only $1.00 each, or six for $5.00. One Queen and the REVIEW for only $1.50.

Mention the American Bee Journal. **W. Z. HUTCHINSON, FLINT, MICH.**

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We beg to announce that we have completed arrangements with the Porters whereby we secure for this country the control of the sale of that very excellent and almost indispensable implement—

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AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS

35th Year. CHICAGO, ILL., AUG. 29, 1895. No. 35.

Contributed Articles.

On Important Apiarian Subjects.

Possibility and Desirability of Breeding Out the Swarming Habit in Bees.

BY BERT LOWNES.

On page 419, the question of whether it is possible or desirable to breed out the swarming habit in bees is asked; and the answers, as given by the different bee-keepers, are such that a novice, after reading them, would know *about* as much (probably less) as (s)he did before, notwithstanding the proverb, that "In the multitude of counsellors there is safety." While I have no especial desire to contradict any of the answers given, still I cannot bring myself to believe that it is either possible or desirable to breed out the swarming habit in bees. In the first place, swarming, properly speaking, is *not* a habit; that is, it has not been acquired by the bees themselves, but has been indelibly stamped upon their natures by the Creator, who doeth all things well. A man may *acquire* the habit of swearing, and he may continue in the habit or not, according to his own will, but the desire to swarm is one of the strongest instincts the bee has—it has existed ever since the bees were created, and I can truthfully say, will exist until they become extinct.

Habits, properly speaking, will grow and strengthen upon those by whom they are practiced. If a man begins the use of alcoholic drinks, he will gradually form a stronger appetite for liquor, until at last he will have no power to break away from the habit, should he desire to do so, and the same may be said of swearing. Should a man begin the use of profane language when circumstances are exceptionally trying, he will soon find himself indulging in the habit on the least provocation, and in many cases with no provocation whatever. But the habit (?) of swarming is no greater, no less, in the bees of to-day than it was in the first colony that took up its abode in the decayed trunk of a gigantic forest tree (?) in prehistoric ages.

Right here let me say in regard to breeding out *any* of the habits or instincts of the bees, that it is no easy matter. One might suppose that a colony of bees, whose ancestors had for hundreds of bee-generations occupied hives precisely alike, would, on swarming, naturally seek another such an hive for a home; but not so. Let a swarm of bees issue, and unless they receive attention in due time, they will start for the *forest* in search of a home. Of course, there are some exceptions, especially in localities where large trees are scarce; but even in such cases I am led to believe that they go to the forest first, but not being able to find a home to their liking, they will enter a knot-hole in the side of a buildiug, or an empty hive, as a second choice. If it is so hard to educate the bees in this one point, how much more so would it be to produce a race of bees that would, contrary to the laws of nature, have no desire whatever to swarm! Why don't the people that profess to be so advanced in the bee-business, produce such a strain of bees? Simply because there is no possibility under the sun of any success whatever on this line. I mean on the line of breeding *out* the swarming habit (?). You might just as well try to breed out the desire to gather honey, and with just as much prospect of success.

While I believe that it is not possible or desirable to breed out the desire of the bees to swarm, I do believe that it is both possible and desirable to perfect a plan whereby the *prevention* of swarms will be a practical success; but even then I think there would be a *few* exceptions, owing to the strong hold the swarming instinct has on the bees. And I believe that right here lies all the so-called success in the line of "breeding out the swarming habit."

From time to time we see it advertised or stated that Mr. So-and-So has a strain of bees that are non-swarming, while in reality Mr. So-and-So simply succeeded in preventing his bees from swarming for a few generations. In my opinion bees that have the swarming habit (?) bred *out*, could not be induced to swarm under any circumstances. Point me to the man that has a colony of such bees. I am confident that I could take any of the so-called non-swarming bees, and after transferring them to an 8-frame Langstroth hive, get them to swarm in six weeks.

Dr. C. C. Miller thinks that since it is not essential for the existence of a colony, and as some bees are more given to swarming than others, it would not be impossible to have bees not given to swarming at all. Of course, some bees are more given to swarming than others, because some queens are more prolific than others. The Italians, as a rule, are more excessive swarmers than the Germans; and the Italian queens are generally more prolific; but are there any bees that are not given to swarming at all?

As to its not being essential to the existence of the colony, I do not believe that the bees are aware of the fact, and I know of no means whereby we could convey such an impression to their little minds; although I cannot agree with W. G. Larrabee, when he says that "If the bees have no desire to swarm or to increase, they would not build queen-cells," for we all know that a queenless colony will build queen-cells from larvæ of the right age, with no desire whatever of swarming; but I do believe that if the desire of swarming should be *entirely* bred *out*, that no drones would be reared, and without drones no increase would be had. I said "no drones would be reared;" but since all queens that are not fertilized produce nothing *but* drones, I will change it and say that no drones would be reared intentionally.

Now, *if* no drones were reared intentionally (I do not say

that they would not be reared, but I do not *think* they would, for in breeding out the desire to swarm you change the entire nature of the bee, and with no desire to swarm or increase, I do not think there would be any desire or use for drones), there would be no drones reared whatever, except those reared by the virgin queen after she failed to become fertilized, and if a queen would have to wait to be fertilized by her own drones, you can readily see that it would take from six to ten weeks before said queen would lay worker-eggs, and what would become of the bees that were already in the hive by that time? You might say that you would keep a few colonies (enough to supply the needed amount of drones) for the fertilization of the queens; but in that case you would breed the swarming habit (?) right back into your bees, after all your trouble to breed it out.

However, I do not think that any person will be called upon to mourn at any such calamity as that, because I honestly believe that it is entirely impossible to meet with any success whatever in that line, and, as I said before, all the success to be obtained in the non-swarming line will be by prevention, and when a person has perfected a plan whereby *all* swarms can be prevented, he should tell it that way, and not that he has bred the swarming instinct out of the bee.

Although I would like to hear the reasons of those who believe the swarming habit (?) can be bred *out* of the bees, I will close by remarking that I have not the slightest hope or fear of any such thing being accomplished.

Charter Oak, Iowa.

Honey Crop in California—Yellow Bees.

BY DR. E. GALLUP.

I have been waiting for the honey harvest to be about over before reporting, as I wanted to give Mr. Brodbeck a little "hauling over the coals" about his distressful cry of a short crop, etc., on page 428; but I see Rambler has given him a pretty good "touching up" on page 486, so I will give results as far as heard from, and the reader can judge for himself.

Mr. John Fox has 15 tons of honey from 140 colonies; Mr. Oderlin, 19 tons from 240 colonies; the Emerson brothers, 24 tons from 300 colonies; Mr. Miller, 19 tons, etc. All these parties report the season "good"—not extra, but good.

I notice in the California Cultivator and Poultry-Keeper, in the bee-department, Mr. W. W. Walk reports 8 tons from 160 colonies. His aplary is located in San Fernando Pass, Los Angeles county. He says: "There is only one-third of a crop of honey in San Fernando and Newhall sections, owing to cold, fogs and cloudy weather"—a state of things we did not have in Orange county, and so far as I hear in San Diego county. I learn from two partles that the honey crop is good in that county.

Quite a mistaken notion that many people have, is that the nearer the coast the more foggy and cooler the weather, but bear in mind that there is quite a change in temperature even sometimes in very short distances. I know from actual observation that there is quite a difference in temperature between here and Los Angeles city. Orange and San Diego counties are noted, by people *who know*, for having a very mild and even-tempered climate in comparison to some other counties in southern California.

We had a three days' cool northwest wind early in the season. It did not affect the honey-flow here at all, as I was very particular to inquire, for I saw in the papers that the honey crop would be badly injured in Ventura and some parts of Los Angeles counties. The paper stated that the wind was so violent that it whipped and stripped all the bloom from the white sage, etc., and some thousands of acres of beans destroyed so the ground had to be replanted. We had no such wind here. Now, Mr. Brodbeck's apiary may be located in such a locality, hence his long-faced cry. I see no reason to change my mind from the prospects early in the season. All the bee-keepers that have reported to me claim that their hives are all extra-full now, and they will probably have to extract once more in order to put their colonies in extra condition for winter.

I say our bee-keepers have done well, when we take into consideration the poor condition in spring, owing to the last season's failure.

THE VERY YELLOW BEES.

I was pleased to see S. E. Miller "touch up" Mr. John McArthur on his pure Italians, on page 487. Mr. McArthur's article would not mislead or influence any practical or experienced bee-keepers—not in the least, because they know better; but where the mischief comes in is in conveying the idea that his yellow hybrid drones are pure Italians. This question was fully discussed in the "Old Reliable" years ago. Mr. Adam Grimm went to Italy in person, and saw the Italians in their native purity. We had queen-breeders in those days that claimed their bees were extra-pure, because their drones were extra-large and yellow. I was one that exposed the fallacy, and Mr. Grimm backed me up with facts.

Santa Ana, Calif., Aug. 5.

What Dr. Miller Thinks.

OVER-RIPENESS OF HONEY.—The Rural Canadian has an article headed "Ripeness and Over-Ripeness of Honey." The writer says: "The apiarist can handle his bees so that they will make good honey." This will be cheering news to some. When your bees begin to bring in some of the abominable stuff they sometimes store, just have a good "handler" come along and he'll handle the bees "so that they will make good honey."

Further on he says: "If the honey is allowed to stand too long in the hive it becomes too thick and heavy, and the flavor undergoes a corresponding change. The rich flavor becomes too strong and ill-smelling, and in time it is noticeable to the amateur." Now you know why honey smells bad—been left too long on the hive!

"In making fine honey for the market, it is quite essential that the apiarist should know just at what period the nectar should be gathered and sealed." After studying some time over that last sentence to know exactly what it means, I'm inclined to think there's quite a bit of "over-ripeness" about it.

AN AVERAGE YIELD.—So many times I'm brought up standing by some such expression as this: "I have secured about half the average yield." Now what is an average yield? In most cases I can get no very definite idea from the sentence quoted. If the writer had said: "I have secured 25 pounds per colony," it would have more meaning, but it would not cost a great many more words to say, "I have secured 25 pounds per colony, about half the average yield." Give us the number of pounds per colony, the number of colonies, and whether comb or extracted, and you've given us very clear information, and then if you add how it compares with the average yield, there's hardly anything left to ask.

BEES' EYES.—On page 508, 3,500 is given as the number of facets in the eye of the bee. It might have been added that that's the smallest number estimated, and that the number varies, one worker differing from another, and queens having fewer than workers, and drones more. Cowan says he found as many as 5,000 in the eye of a worker, and nearly as many in a queen. Cheshire found 6,300 facets, or single little eyes, in the compound eye of the worker, and 4,920 in

that of the queen, while the drone had no less than 13,090. Remember that this means the number of facets in one of the two compound eyes, and that the number must be doubled to find the number of impressions made on the optic nerve. Think of the drone looking 26,000 ways at once!

KEEPING EMPTY COMBS.—G. W. Demaree asks on page 503 for the best way. I'll tell you a good way. Put them in a hive under a colony of bees. I've had one colony take care of two or three stories of empty combs. If the bees are forced to go down through them all to find an exit, I don't know how many stories they would take care of, but for a single story it isn't necessary to oblige the bees to pass down through—just put the story under, with nothing between that and the brood-nest.

POPLAR SECTIONS.—In reply to a query on page 521, I think poplar sections are always made four-piece, as the wood has not the toughness required for bending in a one-piece section.

NAMING THE CHICKEN.—I've heard something about counting chickens before they're hatched, but the editor goes a step farther on page 525, by suggesting a name for the "chicken" while it is still wiggling around in the shell. But if any change is to be made, "Union" is better than "Association," just because it hasn't half the syllables.

WAX-ADULTERATION.—On page 525 is given a method of detecting adulteration in beeswax, but I have since seen in one of the trans-atlantic bee-journals a statement that the plan is utterly unreliable.

BEE-DISEASES NORTH AND SOUTH.—On page 526, R. H. Whitfield is quoted saying:

"There seems to be a greater freedom from diseases in the South than with the North, and we must attribute it to the tonic and prophylaxis of the bitter element in the fall honey."

Is it true that there is a greater freedom from bee-diseases in the South? I had thought of it the other way. Are they free from foul brood in the South? And if that should be held at bay by bitter honey, then it seems that a sufficient amount of bitter could be mixed with their honey in the North; but I think no one has any faith in bitter honey as a cure for foul brood. I don't know of any other disease that is at all common in the North except bee-paralysis, and I don't remember hearing of a case in the North that was very serious, whereas in the South it is sometimes almost as destructive as foul brood.

SEEDS FROM GRAFTS.—Have scientists made another discovery that Bro. Abbott is springing upon us, on page 527? He says seed from fruit raised on a graft will produce fruit "like the fruit of the root on which the graft was made." If I understand that correctly, it means that if a pear is grafted on a quince, and seed from a pear grown on that is planted, that seed will produce a quince tree. Do I understand it aright, Bro. Abbott?

THE HONEY FAILURE.—Usually I'm not very viciously inclined, but I can't stand everything. On page 519, ye editor wants me to give a report of my crop for 1895 as a model for others; and then just as I was cooling off from that, Mrs. Slease had to give me a dig, on page 527. The question is whether I shall move to New Mexico, or adopt the supers Mrs. Slease uses.

RADISH HONEY.—On page 530, Clay C. Cox inquires as to the quality and quantity of honey from the radish. I doubt if he'll ever find out. And if he did find out, I doubt the value of the discovery. It must be remembered that to be of any special value as a honey-plant, a small patch will amount to nothing. I think it likely that the radish is a good honey-plant, being nearly related to mustard. But if each bee-keeper should raise an acre of it, there would be no market in all the world for the seed. There is a large market for the radish for table use, but that would be no benefit to the bees. For new sources of honey I suspect we must look toward the introduction of new forage-plants like alfalfa and crimson clover, or to the growing use of sweet clover as a forage-plant. Lately I was quite surprised to see a fine growth of alfalfa in its third season in northern Illinois. It had been cut for the third time this season, yielding a heavy crop, when hay in general has been a very light crop on account of drouth.

Marengo, Ill.

The Buckwheat Honey-Flow—Other Notes.

BY F. A. LOCKHART.

We have just finished moving our bees to the buckwheat fields. White clover was a failure here on account of the dry, hot weather during its full bloom. The bees filled their hives and gathered a few pounds of surplus from basswood. Buckwheat and fall flowers promise to yield a good crop, as we are having plenty of rain, and everything looks fresh and green. There are several hundred acres of buckwheat within easy reach of the bees, which are in splendid condition for the flow. I will report later how much we harvest from it.

CARNIOLAN BEES VS. ITALIANS.

On page 449, Geo. I. Wolf says he has a superior strain of Italian bees, or a worthless strain of Carniolans. I am surprised to hear that there is a strain of Italians which "gathered from 40 to 132 pounds of honey," while the Carniolans in the same apiary were strong in bees, and did not gather enough honey on which to winter. I will give Mr. W., or any other person, $25 for a queen of such a strain of Italian bees, that will gather such an amount by the side of Carniolans that will not gather enough to winter themselves! The reason why I make such an offer is, I have had Italian queens from 15 different breeders, from all parts of this country, and have failed so far in finding a strain of Italians that are superior to our Carniolans as honey-gatherers. It must be the location and management; if not, why is it that we get a third more honey, on an average, each year from our Carniolans than from our Italians? Even supposing the two races equal in honey-gathering, are there not other qualities to be considered? Carniolans winter well, cap their honey snowy white, and gather very little propolis, using mostly wax instead; whereas, the Italians winter poorly (here in the North), give a water and hence not neat appearance to cappings, and stick everything up with propolis. The race which gives us the most dollars and cents is the one we prefer, and the above-stated superiority of the Carniolans proves which race we want.

YELLOW JACKETS, HORNETS, ETC.

The yellow-jackets have never, as far as known, been so thick up here as this year. They are simply numberless, and eat every dead animal long before it has time to decompose. The honey-dew is also disposed of by them, together with numerous obnoxious caterpillars. There seems to be a running fight between them and the honey-bees, as to which, with the exception of the young bees, hold their own well. The hornets carry off the bees as they do the house-flies. Phebes and kingbirds, too, have been somewhat troublesome in our out-apiaries.

Lake George, N. Y., Aug. 5.

That New Song—"Queenie Jeanette"—which is being sung everywhere, we can send you for 40 cents, postpaid, or club it with the American Bee Journal for one year—both for only $1.10. Or, send us one new subscriber for a year (with $1.00), and we will mail you a copy of the song free.

"The California Honey Crop for 1895."

BY GEO. W. BRODBECK.

On page 486, I notice that Friend Rambler takes decided exceptions to an article of mine which appeared on page 428.

I endeavor, as far as possible, to avoid public controversies, and if the present issue were one between Rambler and myself, I would not make this an exception, but as his article has special bearing on the present condition of things, I do not feel disposed to pass it by.

Mr. Editor, allow me to repeat the following from Rambler:

"I note in your issue of July 4, Bro. Brodbeck's signal of distress in relation to the depressed condition of our honey market, and wherein he charges all the evils of low prices to certain writers who have more enthusiasm then discretion about the capabilities of this State."

The following, as referred to, appeared in the issue of July 4, which was the inciting cause of the above remarks:

"We regret very much that some of our California bee-keepers permit their enthusiasm to control their better judgment, etc."

I made mention of no names, did not state or imply that "Prof. Cook, Dr. Gallup, and others are rather unrellable," and in the letter referred to I made no charge, only a repetition of some incidental remarks of others to myself. 'Tis true, the early spring in this land of flowers has a very exhilarating effect on some individuals, and it seems but natural that in the height of their exuberance they give vent to this superabundance (of climate or whatever you may call it), and the result is, "California is flowing with milk and honey." These predictions are all right if they only come, but if, as during the season just past, they fail to "pan out," what good has been accomplished? And this is why I take exception to such predictions, and the past few months have fully demonstrated the evil effect as the following will illustrate:

A friend of mine visited the Los Angeles honey mart, with the object of disposing of his honey crop. During this visit, in conversing with one of the commission men, he made the statement that the honey crop would be short, and the market being bare, 4 cents for water-white extracted honey (the price offered) was not enough, considering prospects, previous season's failure, etc.; when the commission man replied that he was mistaken, and the crop would not be short, but instead would be large, saying that he could verify his statement by our own bee-papers.

Another individual was served likewise, and being hopelessly discouraged, sold his honey for 3½ cents. Numerous other incidents might be related, to show the use made of these early reports by the class referred to, but these will suffice in support of the assertion that some "permit their enthusiasm to control their better judgment."

In all likelihood, under different circumstances, the situation would not be such a serious one, but when we consider that the majority of California bee-keepers are men in moderate circumstances, with the honey crop a failure in 1891 and 1892, 1893 good, 1894 failure, with a loss of half of the bees, which brings us down to the present depressed state of prices, which, no doubt, is causing many an anxious individual to grasp at even a straw of hope in anticipation of relief from the trying ordeal of the past five years. One swallow may not make a summer, but it is possible for one straw to aid in breaking the camel's back.

I have no ax to grind, "with malice to none," my sole object has been to aid our worthy bee-element. The greater portion of my crop has been disposed of at a price equal to my expectations, nevertheless because I am more fortunate than some others is no reason why I should claim that I am not my brother's keeper.

Since writing my July statement, there has been some material encouragement in the wild buckwheat sections, and as Rambler's report is of later date, this no doubt has brought some reports up to an average.

A few days previous to writing my letter of July 4, I received a private letter from Rambler, in which he stated that their anticipated large yield of honey would not be realized—(this for Rambler). Mr. R. B. Herron, bee-inspector of San Bernardino county (Rambler's county), and one of the best informed bee-men of that section, in an article in one of the San Bernardino papers, stated that the honey crop would be short, urging the bee-keepers to be firm and hold for better prices.

Mr. Elon Hart, of Pasadena, bee-inspector of Los Angeles county, and who is well informed of the past and present condition of our industry, also supplied me with information which coincided with previous reports, and on a visit to this city, during my work at the apiary, I met one of the most prominent bee-keepers of the Fall Brook section, whose report also tallied with previous conclusions. I could cite numerous other substantiating reports, but I deem these sufficient to show that I had some evidence of "reliability."

A business man here in this city, and who is interested in apiaries in this and Ventura county, that in 1893 produced 106,000 pounds, informed me a few days ago that they had produced less than 20,000 this year. Another, who had a good crop in 1893, this season secured nothing. Thus you see it is possible to give varied reports from California, and yet all be true.

The principal honey markets in this State are Los Angeles and San Francisco, consequently if bee-keepers are so unfortunately situated as our Selma bee-keepers, in living over a hundred miles from a market, it is not likely they will find a home market for any large quantity of honey. The price Rambler quotes (8 cents) no doubt was due to this off year, and by request, in behalf of one of Selma's largest producers, I last year visited our leading honey-dealers, and no one would make an offer, for the simple reason that it was an off year, consequently they were not shipping or dealing in honey, and yet I saw some inferior comb honey sold here last fall in quantity at 13½ cents; and to convince Friend Rambler that my "leaning towards the dark side" was not due entirely to individual disappointment, I will state that my average per colony this season was over 115 pounds (nearly all comb honey), and that with an apiary built up from the very bottom during the past spring, and I have disposed of the greater portion of my crop at 1½ to 2 cents above the market price. But "one swallow does not make a summer," so Mr. Mendleson securing a good price for his honey does not prove that all can do likewise, for all may not be so fortunately situated.

This California industry covers a large territory, and when we consider that some of our counties are as large as some of our Eastern States, the possibility of uniting and concentrating our efforts in the disposal of our honey crop is quite a problem. A few have taken things in hand, and are marketing their own crops. Such practical demonstrations, we trust, will eventually result in the organization of a Bee-Keepers' Exchange. Los Angeles, Calif., Aug. 7.

The Palmer House, located at the corner of King and York streets, Toronto, will be the headquarters of the North American convention Sept. 4, 5 and 6. Mr. J. C. Palmer, the proprietor, writes me that he has made arrangements to accommodate 200 delegates. So you see there will be ample room for all. Where members "double up"—two in a bed—only $1.50 a day will be charged; $1.75 if you prefer to "bunk" alone.

Just across the street from the Palmer, is the Kensington, another hotel owned by Mr. Palmer. Here the rate is 50 cents and up for rooms, and meals are furnished on the European plan—pay for what you order.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

An International Bee-Keepers' Congress.

It is proposed to hold an International Bee-Keepers' Congress on Dec. 4 and 5, 1895, in Atlanta, Ga., during the Cotton States' Exposition. The call has been signed by most of the prominent bee-keepers in the southern States, including Texas. At this time of the Exposition the railroad fares will be greatly reduced; the work in the apiary for the year will be ended; and the bee-keeper will have a grand opportunity to meet and mingle with his brethren in convention, to shake hands, become acquainted, and talk over questions of vital importance to the success and prosperity of his pursuit.

This gathering of bee-keepers will know no lines of latitude nor longitude, but will take in the whole American continent. It is hoped that every live and wide-awake bee-keeper will make his arrangements to meet his brethren on the above days. Subjects of the utmost importance to the continued success of this industry will come up for discussion, in which every bee-keeper in our country should feel the deepest interest.

All bee-papers and agricultural journals are most respectfully requested to notice the time of this convention.

The Kingbird Defended—Birds and Insects.

On page 455, there is an article on the bee-martin, or kingbird, as he is variously termed. Mr. Rouse's conclusion seemed to be, that this bird did more harm than good, and that he should be exterminated.

My purpose is to enter a plea in behalf of our supposed enemy, and to invite the readers of the Bee Journal to hear a little more evidence before execution of the capital sentence.

A pair of these birds nested in my yard this year, and sore has been the temptation, at times, to put a summary end to their depredations. There is no doubt but that they have been living mainly on worker-bees. Early in the morning they are on hand long before the drones are flying. Before the sun is half an hour high they have finished their morning meal. I have seen them catch workers scores of times. They will take up their station on the fence in the line of travel taken by the bees on the way to a patch of early peas, and I have seen them dart into the air and intercept a bee, and the vicious snap of their mandibles could be heard every minute.

When not so eager, they will perch on the top-most bough of a neighboring tree, and as the bee goes humming by, the bird will erect his crest, displaying the beautiful crimson feathers, and when the bee draws near to inspect the supposed "flower," she will be snapped up in a twinkling. Again, at noon they may be seen repeating the same performance, and so on day after day.

When their young were able to fly, they were led by the parent birds among the hives, and fed at the expense of my bees, right before my eyes. But looking at my bees I see great clusters of idle bees hanging out in front of each. Raising the cover, I find the hives boiling over with their useless population, and I remember that not until the honey season was over did these birds appear in any numbers. Going to the hive on scales, I find a steady decrease in weight every day. The stores left untouched by the extractor are being devoured by the horde of useless workers.

On such occasions I have looked to the bee-birds and reflected that perhaps they were doing the very thing that the situation required—thinning out an idle horde of consumers merely—for we have no honey-flow at this season, and very little in the fall.

So not being a queen-breeder, my conclusion is to let these specimens of the genus fly-catcher live on to fulfil their mission, which doubtless includes the destruction of thousands of noxious insects.

Some of my bee-keeping friends in the country take the pains, at this season of the year, to send the children and the servants out in the evening with brush-brooms to kill the numerous mosquito-hawks (dragon-flies) that come in scores at nightfall to feed on bees. Realizing that even they are really engaged in reducing a surplus and idle population, I have let them alone.

To the apiarist in this section, the kingbird saves more honey than he causes him to lose. Our honey-flow is over before the birds hatch, and where there are many hives, the loss of bees by birds and insects before the young birds hatch is trifling. Afterwards, the aplarist is interested, and ought to be thankful to the birds for reducing his colonies.

The sportsmen in this neighborhood have made the discovery that the bee-martin takes on the most extraordinary amount of fat in the fall, and is, they say, at that period the most delicious morsel that epicure ever tasted. I have never tried them.

There is a nice balance in nature between the different forms of life in the animal and insect worlds. Some years before the War, the planters in this section, for the purpose of saving their corn in the spring from being pulled up by the birds, put out corn that had been boiled with nux vomica. The wild birds were destroyed by thousands. The very next year the army worm ate every green thing in the cotton fields, and they returned year after year for many years, and until quite lately. It may be conjectured that the just balance in nature between birds and insects has been re-established.

Fifteen years ago it was the custom of the young men of the village to go out in the evening and shoot the bull bats or nighthawks, and this continued until they were nearly exterminated. It was not long before we had a plague of gnats and flies in the summer time. An ordinance was passed forbidding the killing of these birds, and after some years the bull bats were again numerous, and the nuisance of the flies and gnats abated.

And so with owls, which are Nature's natural check on the increase of rats. I have seen the latter so abundant that they would come into people's houses at night, so that the noise of their scampering overhead and between partition walls made night hideous. This state of things did not last long before the large swamp or gourdhead owl began to be heard in our yards after dark. They have hooted on my gallery and screamed after their peculiar fashion at my windows in the silent watches of the night. It was not many weeks before the rats were gone. A certain painstaking naturalist used to watch at the root of a tree where these birds had fixed their nest. He collected the dung thrown out of the nest from time to time, and in this way discovered that rats were the principal diet upon which these birds of Minerva subsisted their brood.

The kingbirds consume many kinds of insects besides the bee. They have their place in the economy of Nature, and though it was hard at first to see them snap up my beautiful Italians, I have at last recognized the fact that they do more good than harm to the bee-keeper. T. S. FORD.

Columbia, Miss.

Italianizing—A Question.

I have been rearing Italian bees for nearly 20 years, but I got careless, neglected discipline, and let them have their own way, until they degenerated into a mongrel race of rebels, with sword unsheathed, ready on the slightest provocation to plunge the dagger into their best friend—the landlord—when he undertook to correct any of their faults, or demand of them rent, which they were seldom able, and never willing, to pay.

Becoming impatient with their impertinence, I determined if I could not moralize, I would at least try to civilize, the whole race, by a complete revolution, which I saw could only be effected by exterminating the indolent, vicious rebel (black) blood. To effect this end I obtained Italian queens last year from some of the best breeders in Tennessee, Florida, Louisiana and Texas; some of these queens were from imported mothers, and some of them were from the golden strain, and they were beauties.

This year I have reared my own queens, selecting as breeders the best of the daughters of imported mothers, and the golden type, and rearing about an equal number of queens from each of these. Of course I had nothing to do with the selection of drones to mate the queens, but the chances for mating were about equal between the two types—imported and golden.

Now I find that the queens of my own rearing are a great improvement over the queens I purchased. They are, as a rule, larger, more prolific, less spiteful, and better honey-

gatherers. Can any one tell the cause of this improvement? I have my opinion, but I will withhold it, at least until I hear from others. I will say the result is just what I expected it would be. J. M. TALKINGTON.

Searcy, Ark., July 24.

ANSWER.—The above correspondent has answered his question himself—the introduction of better blood, and more attention to breeding-stock, and greater care to the rearing and development of the queens. This latter is a *sine qua non*. A queen that is reared in *poverty*—poverty in nurse-bees, poverty in amount of royal jelly, poverty in construction of cell—never can prove as satisfactory as one reared under the best natural conditions.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Swarming and Facing of Hives.

Does it make any difference about swarming, whether hives face south or east? I have my hives in one apiary facing east, and at the home apiary they face south. Others also here have their hives facing east and south. Now those colonies in hives facing east swarmed very little, and those facing south very much. The condition of all were the same. I thought it might be possible that the south face may have had something to do with swarming, as the sun is right at the front of the hive almost all day, and it seems to keep the bees uneasy. This is the first time my attention has been called to it, that it may have something to do with swarming.

Tacoma, Wash. G. L.

ANSWER.—If all other conditions are precisely the same, and if the sun is allowed to shine on the entrances of the hives, I should expect those facing south to be the most inclined to swarm. Simply from the fact that they get more heat in the course of the day, and it is generally conceded that heat is one of the things that helps to incline bees to swarm.

Probably Caused by Worms.

I have a colony of bees that the old ones kill the young bees, and carry them out. What is the cause of such work?

G. E. L.

ANSWER.—Most likely worms. The worms build their galleries through the brood, and the young bees injured thereby are cast out.

Preparations for Wintering—Carniolan Bees, Etc.

1. When the central combs of a brood-nest are about half filled with honey at the end of the season, should I exchange them for the outside combs, and let the bees winter among their solid combs of sealed honey?

2. How would a piece of straw matting do (such as is used to cover floors instead of carpets) to put over the brood-nest in winter, and woolen carpets over this? Would this allow the escape of moisture?

3. What causes the bees to stand on the front of the hives and act as if they were scrubbing? What do they do it for?

4. Do pure Carniolan worker-bees ever have any yellow at the base of their abdomens? J. R. S.

Cincinnati, Ohio.

ANSWERS.—1. Better let them alone.

2. I think it would do well. Indeed, some of our best bee-keepers have used straw-mats. As to the escape of moisture, of course there is no trouble about its escaping through the mats and carpets, but if everything be tight over it of course the moisture cannot entirely escape. But it doesn't require a great deal of room for escape, and the cracks between hive and cover would probably answer. It is somewhat unsettled whether there is any need of escape if there be opening enough at the bottom. It may be well to say that the straw-*mats* used in bee-hives are quite different from floor-mats, being an inch or so thick, but if enough thicknesses of floor matting were used, it would amount to the same thing.

3. No, that's one of the mysteries. At one time it was asserted that this "raking" or "wash-board" act was a sure sign of swarming. But I've seen bees at it when there seemed no possible chance of swarming. I think no one knows anything about why they do it.

4. That's rather a dangerous question to answer. For original Carniolans are claimed to be grey, and only grey, and yet others claim to have developed Carniolans as yellow as Italians. Of course the latter might admit yellow on any part of a Carniolan, but I think the majority would say there should be no yellow anywhere.

Moving Bees a Few Yards.

I have my bees within 10 feet of the house. I would like to move them about 25 or 30 yards away, to a yard I have prepared for them. When can I move them without the loss of any bees? C. H. M.

Grove Hill, Va., July 5.

ANSWER.—Probably the best time is after they settle down for the winter, and are not likely to fly again for some weeks. But they can be moved sooner without great loss. If there are no other bees within 50 yards, and honey is yielding, there may be no loss. Move them after they are done flying for the day, and put up before each hive a board so as to prevent their leaving the hive without noting where they are. Perhaps it will be better to pile a lot of hay or straw at the entrance of the hive, not packed too tight, but a big lot of it. That will be more of a hindrance than the board. Try to make the old spot look as unfamiliar as possible by cleaning away the old stands, and perhaps putting some unfamiliar objects there.

Bees Fighting—Fall Feeding.

1. One of my colonies has been fighting among themselves for the last six or eight weeks. The ones being killed are small, weak-looking bees. They keep fighting all day. I have often caught them fighting, and when I let them go, they go right back to the hive where I caught them, so they can't be robbers.

2. The season in this part of the country was very short, and consequently left a good many colonies in very poor condition. Do you think it is best to feed them up this fall, or wait until next spring? There is no more honey coming in this year. The bees are left on the summer stands all winter without any protection, except one or two quilts. They have good flights almost every week. A. B.

Seattle, Wash., Aug. 4.

ANSWERS.—1. When there is any imperfection about bees that incapacitates them for useful labor, they are promptly driven from the community. Something of this kind may be going on at your hives. Possibly bee-paralysis may be troubling. In any case I doubt if the trouble will be of long continuance.

2. You will find, I think, that it will be better to do the feeding in the fall.

Caging Queens—Probably Honey-Dew—Packing Bees for Winter.

1. When a queen is caged to prevent swarming, and her food becomes all used in the cage, will she die, or will the bees keep her up?

2. I noticed early in the mornings that my bees came in with a load of something, no matter whether cool, wet or dry mornings. They came in a dropping and tumbling condition. I hustled out to see if I could find where they work so early. As I came across the meadow, I came to a small black-oak tree, where bees were working on the acorns. I noticed that small drops of water, or honey, were set around the acorn-saucer, and a bee very quickly licked it up. I put some to my fingers, and it seemed to be waterlike. I went to a hive, took up a bee that just came and missed the hive, tore her apart, and a good-sized drop of nectar rolled down my finger. This is only for an hour in the early morning. I went to the oak tree in the afternoon, and found bees, large ants, and other insects scoot around on the acorns. The acorns were then dry. The bees rear a good deal of brood, but have not much to store away in the months of July and August. Is this honey, or not?

3. I have in my yard what we call "the old house;" it was

built in 1762, with six large rooms. I keep this house only for my bee-supplies and shop. I have 6 colonies in a room up-stairs. I bored a half dozen 1½-inch holes through a log for an entrance. This room is pretty cold in winter. Which will be the best—to set up boards on the back of the hives, and pack all over with forest leaves, or leave them as they are in winter?

4. Our latitude is 35°, and I always thought bees would winter better on the summer stands by just putting an empty case on top with some kind of cushion therein; but the last two winters had a good bit of zero weather, and below zero: therefore, I thought to pack the bees on the summer stands. How would it do to commence moving them together in a row, each day a little, and put up a stand of boards and pack them with leaves? Or would it be better to make a wall for each hive as they are, and pack them? I have 30 colonies here and there in a yard of 5,000 square feet. I use the B. Taylor double sectional brood-chamber. E. B. K.

Brickerville, Pa., Aug. 6.

ANSWERS.—1. When I caged queens in hives I never put any food in the cage, but allowed the bees to feed them. During the working season the workers always feed the queen any way, whether she is caged or not. Even if you cage a strange queen in a hive while they still have their own queen, there will always be some bees good-natured enough to feed the strange queen.

2. I suppose it is honey-dew.

3. I think the packing might do some good. Of course that still leaves them a free entrance.

4. There is a division of opinion as to the benefit of packing. Some think the advantage of warmth is overbalanced by the lack of the sun's rays on warm days. It might be a good plan to try part one way and part the other. I think no one denies that plenty of packing on top may do good. Very likely those that are packed will do better if a group are packed together, being gradually moved close in the manner you propose.

Notes AND Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Rheumatism and Bee-Stings.—"Mr. John Worthington, United States Consul at Malta, has sent us a clipping from the Malta Standard, of April 11, which states that the theory that the virus of the bee-sting is an infallible remedy for acute rheumatism has received most unquestionable confirmation from the practices of the country people of Malta. Bees are said to be plentiful in the island, and the virtue of the sting as a cure for rheumatism has been long established. It is, in fact, said to have been a common practice for generations past, to resort to this remedy in all severe cases, the result being most favorable."—Insect Life.

There is no Mistake.—"Sweet clover is a sort of weed." This was quoted *verbatim et literatim*, Dr. Miller. In fact, I want to say to you just now that when I make a quotation you can stake your reputation for "truth and veracity" that it is there just as I quote it. No use to take space to ask if there is not some mistake. I can read plain print, and when I quote I never put words in any man's mouth. I saw the sentence to which you refer, on page 486, but that is not the one I quoted, by any means. In fact, my comment was written before that was in print. If the editor of Gleanings has met with a "change of heart" on this subject, all I have to say is, I am glad of it. I have been advocating the great utility of sweet clover these half-dozen years or more, and I am glad to know some of the rest of you are finding out what I have known for a long time.

Emerson says somewhere, something like this: "A weed is a plant the use of which has not been found out." I was reminded of this when I read Mr. Wing's letter, on page 434. Why, sir, if his description of the way sweet clover grows in Kansas is true, all that is needed is for them to "find out its value," and it will have a regular boom in that State. He says it will grow where the soil is as "dry as ashes," but "nothing will eat it." Well, that depends. The cows eat it off here in St. Joseph as readily as they would the best grass you ever saw. Of course, stock must learn to eat it. So must they learn to eat prairie hay. I have seen horses in the East, which had been fed all their lives on good timothy hay, that would not touch the prairie-grass hay which we get in Kansas. They would think *it* a "pernicious weed."

Ripened Honey.—"Honey should be allowed to ripen thoroughly (in the hives, if practicable), and it should never be put on the market unripe, untidy or unclean."—Mr. Pringle, as quoted in Canadian Bee Journal.

This would be a good motto for every bee-paper in the country to place at the head of its editorial column, and keep it standing there from week to week—in fact, the year round. I am quite sure that it would go a long ways toward solving the problem of a market for honey, if every man in the land who produces honey would make up his mind to never put on the market any honey that is "unripe, untidy or unclean." There is nothing that so ruins a honey market as a lot of poor, dirty honey. This is not only true of honey, but of any article of human food. The people who live near a market and make first-class, clean butter, never have any trouble to sell it. They are not bothered very much about adulteration, nor laws to protect their industry. The superior quality of their goods is their protection. This is the kind of protection, too, which needs no officer of the law to enforce it. Why do we ask for certain brands of goods? Simply because they have the reputation of being first-class every time, and such a reputation is bound to tell in any line of business. "Always room at the top, young man." This is just as true in the production of honey as in anything else. "*Never put any unripe, untidy or unclean honey on the market.*"

Bee-Keeping in China.—In L'Apiculteur, Rene Madeline gives details on bee-keeping in China, which, on account of the occurrences in that Oriental country to-day, will be read with much interest. Mr. J. Dennler sums up the principal points for the British Bee Journal as follows:

1. Style of hives used. The primitive hive, composed of a hollow trunk of a tree.

2. Apiculture in general. Apiculture is very little practiced in this country. It is often the priests of the temples in the villages who cultivate bees.

3. The harvesting of the honey and wax. This takes place twice a year, in the spring and autumn. For this purpose the lower part of the tree trunk is removed, and half the combs are cut out, the bees having been previously smoked. The smoking is done by burning the roots of a species of artemisia (wormwood).

4. The use made of the honey. It is largely used in pharmacy, and also for making preserves of fruit.

5. The value of honey and wax. Honey sells for one tael the 9⅓ pounds. A Chinese pound is equal to about one and a half English pounds. The tael is worth three shillings. In Pekin honey sells for about 1s. a pound retail (0.42 cents of a piastre).

Wax of first quality sells on the spot for one tael the pound. Second quality wax only realizes one tael for two pounds.

These prices are for wholesale in the mountain villages to the north of Pekin.

Wax is used in China for the purpose of hardening tallow-candles. It is also used by chemists as a covering to pills, and in this manner the chemical matters contained therein are preserved.

6. Do the Chinese convert honey into drinks? Not as a rule. Sometimes in summer they put a little honey in hot water and use this as a drink. Lastly, the people in this country have no special appliances for bee-keeping. They use just those that have been always used, and these are certainly most primitive.

☞ See "Bee-Keeper's Guide" offer on page 561.

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Editorial Budget.

Mrs. Jennie Atchley has been appointed a delegate to represent Texas at the Farmers' National Congress, to be held at Atlanta, Ga., Oct. 12 to 16, inclusive.

Dr. Miller called at the Bee Journal office Tuesday, Aug. 20. He was attending a meeting of the executive board of the Illinois State Horticultural Society, then being held in Chicago. I always feel better after seeing Dr. Miller. He must be the sort of tonic I need.

Prof. Cook's Entomology Class at Long Beach, Calif., from July 15 to Aug. 15, was very successful. It contained teachers, preachers and fruit-growers. Applications for next season's class are already coming in. That speaks well for the instructor. Prof. Cook wins.

The Amalgamation Question.—On page 492 I asked the members of the Bee-Keepers' Union to vote on the question of uniting the North American and the Union into one society. Only six, seemingly, have cared enough about it to vote at all. They are: Jas. A. Stone, Dr. Miller, Wm. Muth-Rasmussen, C. Theilmann, M. H. Mendleson, and L. Eastwood. Their replies will be found on page 563, in connection with those of the regular list of experts who are represented in the Question-Box answers, and to whom the same question was propounded. As might be expected, there is a difference of opinion.

Father Langstroth would like to be at the Toronto convention next week, and will be there if a sufficient amount is contributed to pay his expenses. His daughter, Mrs. Cowan, will accompany him, to take care of him, as she can do it better than any one else. A part of the necessary expenses has already been sent to Father L., by a few of his personal friends, but quite a little is yet needed. Now if any of the Bee Journal readers feel like contributing say one dollar or more (or any amount), if they will please send it at once to this office, I will see that it reaches Father Langstroth, and also report it in these columns, unless requested not to do so.

This is a fine chance to help give Father Langstroth a grand trip and outing, and those of you who will not attend the meeting at Toronto, and thus be saved that expense, may feel abundantly able to send a dollar or so to make it possible for him to be there. In order to be of use, it will be necessary to be sent *at once*, as the time is so short.

It is a Painful Duty to report crookedness in dealing, but such is sometimes necessary. It will be remembered that last spring W. R. Lighton, of Omaha, Nebr., advertised basswood trees for sale at very low prices. Talcott Bros., of Iowa, who are bee-keepers, sent Lighton a cash order for trees, but the trees never came. After writing, and getting no satisfaction, they reported the matter to this office, whereupon I wrote Lighton, but received only *promises* to return to Talcott Bros. their money. After patiently waiting, I threatened to publish Lighton if he did not return the money by a certain date. He failed to do it, so I am only keeping my promise in writing this paragraph.

I believe in giving every advertiser ample opportunity to straighten up all apparently peculiar transactions, but when any one clearly refuses to do the right thing, I also believe in letting my readers know it.

Whenever Mr. Lighton returns the amount of their order to Talcott Bros., I shall be glad to announce it as publicly as I have now reported his unbusinesslike dealing.

Only a Week, and the North American convention will be in session in Toronto. Are you going to be there? Father Langstroth fully expects to be, and I know all will be glad to see him again. I have never had the good fortune to meet him, so I am anticipating a real pleasure next week. It is my intention now to leave Chicago next Monday afternoon, reaching Flint, Mich., late that evening, stopping with Bro. Hutchinson until 10 the next morning, when we will proceed to Toronto, arriving there about 7 p.m., Sept. 3. This will give me one day (the 4th) to visit the Industrial Exposition, or run across to the famous Niagara Falls before the convention opens, Wednesday evening.

I am looking forward to a delightful time among our Canadian friends and others. I trust the convention may be the best the North American ever held. Whether it will be or not, will depend entirely upon those in attendance. Let each go with the determination to do his and her best to help make it the grandest meeting of bee-keepers this continent ever beheld.

Marketing the Honey Crop.—Before me lie two letters asking me to recommend some reliable firm of honey and beeswax dealers to whom can be shipped the products of the apiary. By referring to the "List of Honey and Beeswax Dealers," published in every number of the Bee Journal, you will find those who make that very thing a business. Of course we do not guarantee anybody, but we do not *knowingly* permit any dishonest firm to be represented in the advertising columns of the Bee Journal. But before shipping your honey or beeswax, *be sure* to have a *definite* understanding with the firm to whom you contemplate shipping. It may avoid a heap of trouble later on.

I would be glad to have any just complaints against Bee Journal advertisers sent to this office, so that should any unscrupulous dealers attempt to defraud, they may be "spotted," and their names dropped from among the advertisers in these columns. I don't propose to give such fellows a second chance to trick the honest readers of the Bee Journal.

The Chicago Meeting of the Illinois State Bee-Keepers' Association will be held Wednesday and Thursday, Oct. 30 and 31, 1895, during the annual Fat Stock Show, when reduced fares will be granted on nearly if not quite all roads. The particular place of meeting in Chicago will be announced later.

The Springfield meeting of the same association will be held Nov. 19 and 20, 1895, during the State Odd Fellows' meeting, when there will be low rates all over the State.

My Ohio Visit was too short. I started the evening of Aug. 8, on the Baltimore & Ohio railroad, in one of those fine Pullman palaces (or "schooners," as some call them).

By the way, the old B. & O. is a splendid road to ride on. I have gone East on it several times, and every time I like it better. It "gets there!" And right on time. Try it, the next chance you get. You'll enjoy the ride. I did.

Well, my first stop was at Sterling, Ohio, just 12 miles south of Medina. It was 5:30 a.m., and I had 1¾ hours to wait until a train on another road would take me up to "Rootville.". Don't know where *Root*ville is? Well, it's where The A. I. Root Co. spreads out over several acres of land, about ½ mile west of the city of Medina.

I boarded the train for Medina at 7:17, reaching there about 8:00. Bro. A. I. Root met me at the train accidentally. "Ernest" had expected to meet me, but I came one train earlier than he supposed I would. "A. I." escorted me to Ernest's pleasant home, where I met his devoted wife, and little son, Master Leland, who was playing with Mr. Calvert's young son, Howard, about the same age as Leland. And two bright boys they are.

Mr. Calvert, himself, came in soon after, when we had a sort of four-cornered visit for a short time.

Ernest then took me over to the office, shop, store, factory, printing-office, book-bindery, tin-shop, truck-garden, warehouse, lumber-yard, bee-yard, and lots of other places "too numerous to mention." Why, I was just bewildered! I had seen pictures of the Root establishment, and thought it looked pretty big from the outside, but I found it a heap bigger when I came to look around on the inside. And how neat, clean and conveniently arranged was everything.

In the busy season, about 100 employees find work there, with a pay roll of something like $1,000 a week. From Jan. 1 to June 1, over 5,000,000 polished honey-sections were turned out. At the time I was there they were about shut down for the purpose of adding a 90-horse power engine, and in other ways nearly doubling their capacity.

I was kindly shown through all departments, and enjoyed very much seeing how business is carried on at "The Home of the Honey-Bees." It would take too much time and space to tell all about everything and everybody I met there, but it was a day long to be remembered.

In the evening Bro. Calvert, with Mrs. Calvert (A. I.'s oldest daughter), and Mrs. E. R. Root, with the children mentioned before, took me out for a two hours' carriage ride around Medina. The cemetery is one of the sights. The most neat and comfortable looking "city of the dead" I've seen outside of Chicago's well-kept cemeteries. There are many churches in Medina, and numberless thrifty-looking homes. No saloons there, as might be expected. They know better than to tolerate such a curse. But I did notice acres of tobacco growing between Sterling and Medina. What a large field Bro. A. I. has to work in right at home. But may be it isn't all raised for home consumption. At any rate, I can't help feeling that such a strong anti-tobacco man as A. I. Root is, should put in some good licks near home. I believe Ernest did say his father had "labored" with some of the tobacco-growers, but without avail. What a pity that any one should soil his mouth, hands, and even his farm, with such a filthy weed! None of that for me, thank you!

In order to catch the first east-bound train at Sterling the morning of Aug. 10, Ernest generously offered to drive me over. We arose at 5 o'clock, and started at once. It was a delightful Ohio morning, and how I did enjoy that ride of 12 miles! It was so invigorating, and the visit so pleasant.

At 7:15 the train reached Sterling. I said "good-bye" to my friend and brother editor, and started for my old home at Randolph, Ohio, where I arrived about noon. I had not been there for four years, so you may know what a pleasure it was to again meet parents, brothers, sisters, and former friends and schoolmates. What a precious week it was! Not the least enjoyable part was the old Sunday school, where I used to attend when a boy. It did me good to meet with them once more.

What with riding and boating, swinging in the hammock, and talking over the days of yore, I did have a restful week, and returned to Chicago feeling well repaid for the effort made before going, in order to be away from the office for so long a time. Mrs. York returned with me, so now I'm not even "wifeless," much less "homeless."

I regret that my stay was too short to visit bee-keepers also, though I did meet several in Randolph. All reported the season too dry for honey-production, though some had taken a little honey.

North American and the Union.—Mr. F. J. Gunzel, of this State, asks how he is to proceed to become a member of the North American Bee-Keepers' Association and the Bee-Keepers' Union. By sending $1.00 annual dues to W. Z. Hutchinson, of Flint, Mich., he can be a member of the North American; and another $1.00 sent to Thomas G. Newman, 147 S. Western Ave., Chicago, Ill., will make him a member of the Union. It is now thought by a good many that at least $1.00 per member can be saved by uniting the two organizations into one, and that a much larger and more effective society than either now is would result. Why not?

"The Honey Crop," Editor Hutchinson says, "will be light this year, and if honey were a staple like wheat and potatoes, the price would climb up, up, up; but it is a luxury, and when the price begins to go up, people stop buying it. The prices may go up a *little*, but not much, I think, and I should not hold honey hoping for an advance in prices."

Canadian Beedom.

A Model Apiary.

I have never yet seen one. A great number of pictures of apiaries have been given in the bee-periodicals, many of them having features more or less desirable, but I do not remember one that was worthy of being copied in all respects. The chief defect I have noticed is in the want of proper tree surroundings. Either there are no trees at all, or they are unsuitable as to nature and height. The only instance I know of in which planting was done with a view to promote the welfare of an apiary, was the setting out of grape-vines by Mr. A. I. Root, the vines being intended to shade the hives. This was good so far, but there are other purposes beside shade to be served by planting. The most important is to furnish accommodation for swarms. Grape-vines, from the nature of their growth, are not adapted for this purpose. If shade were the only point to be considered, it is easy to provide that without vines or trees. But suitable objects for swarms to settle upon are wanted, and trees answer the purpose best, provided they are not too tall and inaccessible.

Bees have swarmed from time immemorial, and will probably continue to do so down to "the last syllable of recorded time." Some bee-keepers dream of breeding out the swarming instinct, but it is doubtful if it will ever be done, or, if it is, whether it will not be at the cost of some other change in the nature of the bee which will be detrimental to bee-keeping. It is also doubtful if any really practical self-hiver will ever be invented. The two great objections to having bees swarm are the difficulty of watching them, and their liability to cluster out of reach. The difficulty of watching can be

overcome, except in the case of out-apiaries. When only a few colonies are kept they can be placed so near the house and in such a readily observable position, that they cannot swarm by stealth, while in a large apiary a watcher can be afforded during swarming-time. The other difficulty, that of clustering in inaccessible places, can be overcome by having no tall trees in the immediate vicinity of the apiary. A model apiary will be surrounded by low-growing trees, and to recommend the planting and cultivation of such is the main object of this article.

When I began to keep bees, I was living on about an acre of land, on which fruit, shade and ornamental trees had been planted about three years. It came the nearest to being a model apiary of any I have had during the 30 odd years that have transpired since. Among the shade and ornamental trees there was a liberal sprinkling of evergreens, for I had an ambition to collect specimens of all the conifers that would flourish in my locality. For a number of years during which I occupied that place, only one swarm went outside of my fence, and every swarm I had clustered on the evergreens, in preference to the fruit and deciduous trees. I am strongly inclined to think that where bees have a choice they will select evergreens to swarm on. Whether it is the fragrance of such trees that is particularly grateful to the bees, or whether the foliage facilitates the formation of the cluster in any way, I do not know, but in all my experience as a bee-keeper I have noticed a most decided preference for evergreens as clustering-places for swarms.

In my model apiary, if I were to start one, I would plant only dwarf fruit-trees and various kinds of conifers. The latter should be branched close down to the ground, and the upward growth repressed. Dwarf fruit-trees are not apt to grow more than ten or a dozen feet in height, and should be kept within bounds by judicious finger and thumb pruning. I cannot imagine a more beautiful sight than an apiary might be made to present embowered in a somewhat sparsely-planted grove of dwarf fruit-trees and evergreens, provided the hives were made a little artistic, instead of being the plain, homely-looking boxes which they usually are.

Apis Dorsata.

I think Canadian bee-keepers in general will endorse the following expression of opinion in the July number of the Kansas Bee Journal:

Mr. Holt has the honor, if there's any in it, of creating an interest and a desire to investigate the Giant Bee of India. There is talk of raising a fund to import some of them by way of experiment. Well, when this has been successfully done, if it will be, some wonderful stories told of their merits, and a few fellows have supplied bee-keepers all over with queens of that species, as they certainly would before time had been given to test these bees—well, we can look for a general sick spell among bee-keepers again. It's about time bee-keepers were hunting up something to fool themselves with. The Kansas Bee Journal is for anything that promotes their interest; foolish and expensive schemes we leave to those who can afford them. A bee-writer recently suggested they could be experimented with nearer home. Wise idea.

Bee-Swarming Hours.

Mr. B. Taylor tells us that in Minnesota swarms frequently come out as early as six a.m., and as late as six p.m. He adds: "Those late swarms always remain over night, and I have found many a one by *chance* the following morning."

In upwards of 30 years' experience in bee-keeping in Canada, I have never known bees to swarm before eight o'clock in the morning, nor later than four o'clock in the afternoon. How is this? I know that, as a general rule, stores open earlier in the United States than in Canada, and the rush of general business is more perceptible in the morning hours, but I did not know before that the bees open shop sooner in the day, and start earlier with their swarming, at the same time keeping it up longer and later.

In one case, when my family had arranged to go for a picnic on Dominion Day (July 1), and I was loth to leave because I had a colony of bees threatening to swarm, the reproach that I cared more for my bees than I did for my family, led me reluctantly to go. On my return, after dark, I was very grumpy on finding that the bees had swarmed in my absence, but to my surprise and delight I found them hanging on an evergreen bush the next morning. When the bees came off, I do not know. Our picnic party started at 1 p.m., and in this case the bees may possibly have swarmed later than 4.

Among the Bee-Papers

Gleaned by Dr. Miller.

THE REPORT OF THE ST. JOSEPH CONVENTION.

From a communication in the American Bee Journal, it appears that Frank Benton, the Secretary of the North American Bee-Keepers' Association, has not yet sent in the report of that convention. Mr. Benton received $25 for his services as Secretary, and deserves very strong censure for his action, or *in*action. Mr. Benton will have to do very much to regain the confidence of bee-keepers. When men act as Mr. Benton has acted we have a right to mark them, just as we have a right to mark those who act in the best interests of bee-keepers, and reward them.—Canadian Bee Journal.

CRIMSON CLOVER.

A. F. Ames, of Claremont, Va., writes thus concerning it in Gleanings:

"I noticed the little clipping about crimson clover, in Gleanings. It's a great bee-plant, and comes so early it gets ahead of drouth. Every farmer and bee-keeper should buy it. It stands several degrees below zero here with no protection; in fact, we think, with Prof. Massey, it is hardier than red; will also grow on poorer land, but land can be too poor for it. It should be sown early to insure its wintering; North, not later than last of August. Home-grown seed is much hardier."

MOVING BEES A SHORT DISTANCE.

H. E. Hill gives the following plan in the American Bee-Keeper:

"Remove two or three frames of brood, the queen and majority of the bees to a hive in the new location. Provide the usual mark to arrest the bees' notice, by placing a board against the front of the hive. About the sixth day following, remove all queen-cells; then, in the evening, place the remaining portion of the colony, hive and all, upon the one containing the queen. In a few days the brood may be restored to its former position, and the extra combs which may have been temporarily used to fill up, removed. Loose bottom-boards are presupposed, as this is one of the many "kinks" facilitated by their use, which would otherwise be impossible."

HOW THEY DO IN TEXAS.

In 1894 my honey crop was 150 pounds per colony, half comb in one-pound sections. I divided one colony in 1894, and ran it for increase artificially, and made eight colonies from it, and I only gave each division one comb of brood and honey, and one empty comb besides, and they built their own combs and filled up for winter. A narrow starter on the frames is all I used. Yes, I forgot to say that I took some honey from them, too, and weighed the honey I took from one of the eight, which was about an average, and it was 133 pounds, and left them about 40 pounds each for winter. Now, friends, don't think we can do that well every year, for we cannot.—L. L. Skaggs, in Southland Queen.

THREE STRAY STRAWS FROM GLEANINGS.

"The surplus will be a little whiter in appearance where there is a little capped honey under the top-bar than where the space is taken by brood," says F. A. Snell. That is, sections are darkened if too close to the brood; and because I

can't make sure of the strip of honey to make the brood keep its distance, I want a top-bar not less than ⅛ thick. [Here is a point for the anti-thick-top bee-keepers to consider a little more than they do; but this is not the only point in favor of deep bars.—EDITOR.]

I don't know whether it's best to have more than one entrance to a hive; but I notice that, when there's a small hole half way up the front of the hive, the bees crowd it a good deal more than the regular entrance. It is an old-fashioned way; but as the bees seem to like it, isn't it just possible it is a good thing? [That practical bee-keeper, Mr. Julius Hoffman, of "Hoffman-frame" fame, with his several large apiaries, believes in having two entrances—one at the bottom, and one at the bottom of the second story. His hives are deep.—EDITOR.]

Foul brood cannot be affected by drugs, and it's no use to try anything in that line, seems to be the verdict on this side the water. May be. But in the face of so much testimony in favor of drugs from good men on the other side of the water, it seems to me pure pigheadedness to refuse to make any trial. If I had a case of foul brood in my apiary I would at least use in the healthy colonies some of the drugs that have a reputation as preventives. If it did no good it could do no harm. [After you had tried as much as we, and failed, your courage would be weak.—EDITOR.]

THE NORTH AMERICAN AND THE UNION.

In an editorial in the August Review, Editor Hutchinson says this:

"The advantage to the Union would be there would be a face to face discussion each year that would be of great advantage. There is scarcely an organization that does its best unless its members have a grand meeting once a year. This friction of mind against mind in an actual personal encounter and consultation is a great generator of ideas. Better work will be done by the Union when its members hold annual meetings. When the Union holds annual meetings at which may be discussed subjects pertaining to practical apiculture as well as those relating to the Union as it is now conducted, of what use is the North American? Or, if the North American would take up the work of the Union as now performed, of what use is the Union? In short, what use is there in having *two* societies when one society rightly organized can do all the necessary work? One society can be more cheaply conducted than two, and will be stronger and more prosperous. I know that the character of the work of the two societies is somewhat different, but the difference is not of such a character that the amalgamation of the two Societies could not conduct successfully all of the branches of the two as now managed.

"Notwithstanding that I said a month ago that I had no selfish personal ends in view in seeing the two societies united, the story has been started that I wished to get the two societies united and then get control of the amalgamation—in short, to become its Secretary-Manager. Nothing was further from my mind. Under no consideration would I accept the position. I doubt the advisability of any bee-keeping editor accepting that position if such an amalgamation should be effected. There is a certain class that would be jealous of the unlucky editor."

Eugene Secor stands with Manager Newman, and says in Review:

"It is not clear to me that such a union will prove wise. An increase in the membership of the North American would be desirable from some points of view, and yet, I don't know that numbers alone is necessary to accomplish all that we can reasonably expect such an organization to bring about.

"More money in the treasury would be a good thing to have when we want a committee to do some work which is intended for the benefit of bee-keepers at large—such, for instance, as the work of the gentlemen who appeared before the R. R. Classification Committee last winter. They ought not to be obliged to pay their own expenses when working for the common good. And yet I doubt if more could have been accomplished for bee-keepers before that Committee if we had expended $500. Some writers have been lamenting the failure of the North American to bring about any good, and I want to cite that one act as proof of its right to exist."

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

The North American at Toronto.—Although all the program for the meeting of the North American Bee-Keepers' Association at Toronto is not quite ready to announce, Secretary Hutchinson has sent me the following in regard to transportation and hotel arrangements for those attending the convention at Toronto, Sept. 4, 5, and 6:

The North American will hold its annual convention in the auditorium of the Normal School, at Toronto, Ont., Canada, on Sept. 4, 5, and 6, the first session being on the evening of the 4th.

The Trunk Line Association and the Central Traffic Association have both given reduced rates—a fare and one-third. Persons going will buy a ticket paying full fare going, and get a Certificate from their station agent. If a ticket Certificate cannot be obtained because your starting-point is a small place, then buy a ticket to the nearest large town where a Certificate may be obtained. It might be well to inquire of the agent a few days beforehand, and thus learn if he has any Certificates, and the point where one can be obtained if he has none.

If 100 persons are present who have come on some legitimate form of railroad transportation, all who have Certificates, and have paid as much as 75 cents fare going, will be sold tickets for the return trip at one-third fare. In Canada and Michigan, and in other States, perhaps (but of this I do not know), round trip ticket can be bought for but a single fare. This, of course, will be better than the certificate plan. Perhaps many living a short distance beyond where excursion rates are given, will find it cheaper to buy a regular ticket to the nearest point where excursion rates prevail, but those coming long distances will probably find the Certificate plan the best. Each one must look up these matters in advance and decide for himself which is the best for him.

The Trunk Line Association covers the roads from Niagara Falls, Buffalo, Salamanac, N. Y., Pittsburg, Pa., Bellaire, Ohio, Weeling, Parkersburg, and Charleston, W. Va., and points east thereof *except* New England. I hope to get reductions from New England. The Central Traffic Association covers the territory west of Buffalo and Pittsburg to Chicago, and St. Louis on the west, and the Ohio river on the south.

Tickets must be bought not earlier than three days previous to the meeting, and return tickets bought not later than three days after the meeting.

The headquarters at Toronto will probably be at the Palmer House, corner of King and York streets. This is $2.00 a day house, but if members will double up, two in a bed, the price will be only $1.50 a day. If separate beds are wanted, it will be $1.75. Remember this is during the Industrial Fair, when no reductions at all ought to be expected. The street cars pass the hotel, and they can be taken within a block of the Normal School, where the convention is to be held.

While the program is not yet complete, the following can be announced:

Thomas G. Newman, Chicago, Ills.—The Bee-Keepers' Union: Its Past, Present, and Future.

Dr. C. C. Miller, Marengo, Ill.—Amalgamation of the North American Bee-Keepers' Association and the Bee-Keepers' Union.

Hon. John Dryden, Minister of Agriculture, Toronto, Canada—Address of Welcome, Etc.

A short address by Jas. Mills, M.A., L.L.D., President of the Ontario Agricultural College, Guelph, Canada.

S. T. Pettit, Belmont, Ont.—Introducing Queens.

Ernest R. Root, Medina, Ohio—Bee-Paralysis: What We Know and Should Do About It.

Allen Pringle, Selby, Ont.—Mistakes of Bee-Keepers and Bee-Journals.

H. R. Boardman, East Townsend, Ohio—How to Feed Bees Profitably.

Hon. R. L. Taylor, Lapeer, Mich.—How Bee-Keepers Might Receive More Benefit from the Experiment Stations.

F. A. Gemmill, Stratford, Ont.—Who Shall Winter Bees Out-of-Doors; Who in the Cellar?

Dr. J. P. H. Brown, Augusta, Ga.—What is Indicated by Color in Italian Bees?

James Heddon, Dowagiac, Mich.—The Proper Size of a Brood-Nest, and How It Shall be Decided.

B. Taylor, Forestville, Minn.—The Surest and Best Way of Producing a Crop of Comb Honey.

G. M. Doolittle, Borodino, N. Y.—Some Things of Interest to Bee-Keepers.

R. McKnight, Owen Sound, Ont.—Legislation for Bee-Keepers.

Flint, Mich. W. Z. HUTCHINSON, *Sec.*

Attention, Bee-Keepers!

We are Now Ready to Receive

Shipments of HONEY, both Comb & Extracted

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We received 812 Shipments last year. We kindly solicit the business of our friends of former years, and a Trial Shipment of all Bee-Keepers in the Country.

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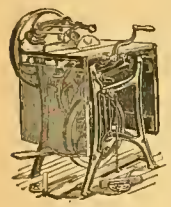

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NO DANGER IN ELASTICITY.

Some manufacturers admit that it's a good thing, "but don't want **too** much of it." The way they use it reminds us of the chicken broth another fellow made by hanging a fowl so as to cast a shadow on a cistern full of water, then season to suit the taste. Our people like it stronger, spring enough to toss a ton of live beef like an apple in a mill race. That style of **elasticity demands** strength of material.

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The supply of Medicines is quite enough for months, perhaps years, and will save you many times what it cost, besides much trouble and anxiety during sickness in the family. These are no patent medicines!

When any of the Remedies are used up, we will promptly mail a duplicate bottle of the same Remedy on receipt of 25 cents for each bottle.

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Send postal card for free Circular. Address,
G. W. YORK & CO., 56 5th Ave., Chicago, Ill.

Saved $10 in Doctor's Bills.

Here is an unsolicited testimonial that we have received, and which speaks for itself:

NEWTON, N. J., Aug. 10, 1895.
I am pleased with the Home Remedy Case. My wife says it has saved us $10.00 in doctor's bills. Respectfully, C. H. SHERWOOD.

THE BOTTOM IS OUT

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LEININGER BROS.,
33Etf FT. JENNINGS, OHIO.

WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

General Items.

Honey Crop Above the Average.

Bees are doing well in this part of the world, and the honey crop for 1895 will be above the average. MRS. J. N. HEATER.
Columbus, Nebr., Aug. 15.

Working on Buckwheat.

The honey crop has been almost a total failure in this locality. I have only 300 pounds from 95 colonies, and there is hardly any honey in the hives, but the bees have commenced working on buckwheat, and they may get enough for winter yet.

A. W. SMITH.
Parksville, N. Y., Aug. 10.

Bee-Keepers and Bee-Journals.

MR. EDITOR:—In your program, on page 524, for the approaching North American convention at Toronto, that is a queer subject you have me down for, to-wit: "Mistakes of Bee-Papers and Bee-Journals." Now, know all men, whom it may concern, by these presents, that I never consented to write or speak on such a subject; albeit I did promise that I would (accidents excepted) write upon the following subject for the convention, to-wit: "The Mistakes of Bee-*Keepers* and Bee-Journals." That the latter really do make mistakes we have the evidence right here, for this is one, and an absurd one. I shall certainly endeavor to utilize a spare hour between this and the convention in laying out bee-keepers and editors—I mean their mistakes.

ALLEN PRINGLE.
Selby, Ont., Aug. 20.

[Thank you, Bro. Pringle, for that correction. It's all the fault of the Canadian Bee Journal, from which I first put into type the program published on page 524, except the last four essays and essayists, which were sent by Secretary Hutchinson. But I notice in the August Review your subject is printed the same way. I think you'll have to "go for" some other editors this time. And yet I know it isn't very commendable in me to copy their errors.

Permit me to suggest that your subject does not include the "laying out" of any *editors*. If you stick to your text, you will name no particular editors at all.—EDITOR.]

Something About Crimson Clover.

Crimson clover was introduced in this country several years ago by the late Dr. Haradine. Being a great lover of flowers, he was attracted to this plant by its great beauty, which is hardly exceeded by the finest flower that adorns yard or garden. The beautiful deep green which may be seen all through the winter when not entirely covered by snow, grows deeper and brighter as spring advances, until May, when the flowers appear, making a sight to behold and to remember.

At first its value as a forage plant was not understood, and as a soil restorer it was unknown. Everyone admired its beauty, and numerous plots were grown for ornamental purposes, but years elapsed before farmers awoke to its value as a regular rotation crop. It is now grown in all parts

Biggest Premium We Ever Offered!

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—OR—

MANUAL OF THE APIARY.

—BY—

PROF. A. J. COOK.

This 15th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without "THE BEE-KEEPER'S GUIDE."

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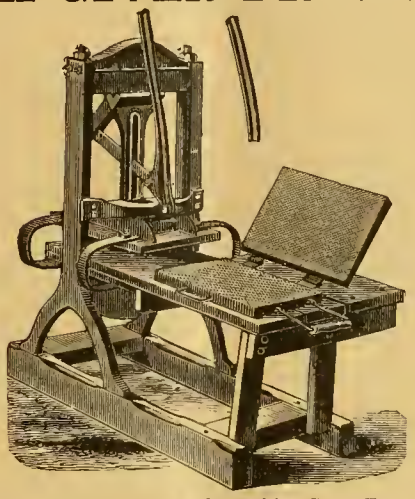

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1 Given Press with Lever, 11x16½ inches.
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4 Dipping-Boards, 10x12.
2 Dipping-Boards, 6x16½.
2 Double Boilers for Wax.
1 Book of Dies, 9x16½.
1 Book of Dies, 9x12.

The outfit cost over $100, and is a great bargain for any one desiring to make Foundation for personal use. I offer it for $50.00, free on board cars here.

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of the United States, and is now no longer a matter of experiment. It is good for hay—will yield 2 to 3 tons per acre of the finest quality. It is valuable for seed, which it produces in large quantities. It makes excellent bee-pasture, and as a honey-plant it cannot be excelled. It is good for fall and early spring pasture, and is the only clover that remains green all winter; and its greatest value is in its ability to store up plant-food, and at the same time send down deep-feeding roots in the subsoil, and bring to the surface elements of fertility that would be otherwise lost.

Crimson clover is an annual, and must be sown in its proper season; this extends from Aug. 1 until the last of October. Eight to 10 quarts of seed per acre are usually sown. If any of the readers of the American Bee Journal would like to test a sample of crimson clover, I will mail a package for a couple of stamps for postage.

L. STAPLES.

Grand Rapids, Mich., Aug. 14.

Stored Fine Yellow Honey.

Bees up to July 25 barely made their living, but from that time they gradually gained in stores and surplus, of very fine yellow honey, and now some of the best colonies have filled two and three cases of 28 sections each. C. THEILMANN.

Theilmanton, Minn., Aug. 13.

Illinois State Members' Reports.

The last report from the members of the Illinois State Bee-Keepers' Association is so light that I came very near making up my mind not to send it in. However, here it is:

Frank X. Arnold, of Deer Plain, answers as follows:

1. How many colonies? 122.

2. What are the prospects for a honey crop? Fair.

3. How much honey gathered to date? About 1,900 lbs.

4. Is the honey gathered No. 1 or not? Yes, mostly clover.

M. Bevier, of Bradford—1. 37. 2. Not very good; has been too dry. 3. None; it is all the bees can do to make a living.

Peter Blunier, of Roanoke—1. 61. 2. As the rains have come now, a little fall honey may be expected. 3. None to any amount. 4. What little I have is good.

W. G. Cole, of Canton—1. 10. 2. Poor. 3. Probably 40 lbs. 4. Looks well; haven't tasted it.

P. J. England, of Faucy Prairie—1. 14. 2. Good for a fall flow. 4. None.

Dr. C. C. Miller, of Marengo—1. 146. 2. Nix. 3. 000.

Jas. Poindexter, of Bloomingtou—1. 144. 2. Doubtful if sufficient for winter stores. 3. 00. 4. It has been fair quality.

Geo. F. Robbins, of Mechanicsburg—1. 27. 2. Good—for next year. 3. Are you making fun of me? 4. Yes.

Pres. J. Q. Smith, of Lincoln—1. 47. 2. Poor. 3. None since last report.

Jas. A. Stone, of Bradfordton—1. 60. 2. Poor. 3. Hives are growing heavy, but none to spare for surplus so far; bees swarming in August.

JAS. A. STONE, *Sec.*

Non-Stinging —AND— Non-Swarming Bees

This famous strain of Yellow-Banded Bees are giving satisfaction where they have been introduced. I have had this strain in my apiary six years, and never have had a swarm of bees from them. And in the particular colony from which I am rearing Queens, I have never received a sting. Every subscriber to the **American Bee Journal** can obtain one WARRANTED QUEEN by remitting 75 cts. Or $1.50 pays for the above bee-paper and one of the finest "Adel" Queens.

TESTIMONIAL.

WILLOW GROVE, Del., July 16, 1895.
MR. H. ALLEY: The best queen I have came from you. The colony has stored 119 pounds comb honey from fruit bloom and crimson clover. White clover is a complete failure. J. COLBY SMITH.

HENRY ALLEY,
34Atf WENHAM, MASS.
Mention the American Bee Journal.

TAKE NOTICE!

BEFORE placing your orders for SUPPLIES, write for prices on 1-Piece Basswood Sections, Bee-Hives, Shipping-Crates, Frames, Foundation, Smokers, etc.

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Queens

3 or 5 Banded—Untest'd 60 cts.; 6 for $3.25. Tested, 75c.; 6 for $4.25.
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Honey-Jars, Shipping-Cases, and everything that bee-keepers use. **Root's Goods at Root's Prices,** and the best shipping point in the country.
Dealer in Honey and Beeswax. Catalogue Free.

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Golden Italian Queens.
August and September, 60 cts.; Oct., 75c.
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Tested Queens, $1.00 each.
By return mail. Satisfaction Guaranteed
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1895 SAVE MONEY 1895

If you want first-class ITALIAN QUEENS *FOR BUSINESS,* **Foundation** at Wholesale Prices, **Hives,** suited for the South, or **SUPPLIES,** send for Price-List—to

J. P. H. BROWN, AUGUSTA, —GA.—
Mention the American Bee Journal.

Convention Notices.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association in Fort Scott, Kans., on Sept. 19, 1895. All are cordially invited to come and have a good time. There will be a full program.
Bronson, Kans. J. C. BALCH, Sec.

MINNESOTA.—The next meeting of the Southern Minnesota Bee-Keepers' Association will be held at Winona, Oct. 15 and 16, 1895. All members are urgently requested to attend. All bee-keepers and others interested are cordially invited. E. C. CORNWELL, Sec.
Winona, Minn.

WISCONSIN.—The Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting at Platteville, Wis., Oct. 8 and 9, 1895. "Come, every one." Don't get discouraged if we haven't got a crop of honey. We will have a good time at Platteville, just the same. Bring your wives and daughters with you. Many interesting subjects will be discussed. M. M. RICE, Sec.
Boscobel, Wis.

ILLINOIS.—The Chicago meeting of the Illinois State Bee-Keepers' Association will be held Oct 30 & 31, 1895, during the Fat Stock Show, when low railroad rates will be a settled fact.
The Springfield meeting will occur on Nov. 19 and 20, during the week of the State Odd Fellows' meeting, when reduced railroad rates will be given all over the State.
Bradfordton, Ill. JAS. A. STONE, Sec.

North American Bee-Keepers' Association

OFFICERS FOR 1895.

PRES.—R. F. Holtermann.....Brantford, Ont.
VICE-PRES.—L. D. Stilson.....York, Nebr.
SECRETARY.—W. Z. Hutchinson...Flint, Mich.
TREASURER.—J. T. Calvert.....Medina, Ohio.

National Bee-Keepers' Union.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
GEN'L MANAGER—T. G. Newman, Chicago, Ill.
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By Mail for One Dollar.

Five cross-bars are rivited in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through.
It is easily put together and folds compactly in a case, 1x6x7 inches, the whole weighing but 5 ounces. It can be worn over an ordinary hat; fits any head; does not obstruct the vision, and can be worn in bed without discomfort. It is a boon to any one whom flies bother, mosquitos bite, or bees sting.

Nets, 50 cts. each.

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Comb Honey, Extracted Honey, and BEESWAX.

Spot Cash paid for Goods at Market Prices.

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35A12 *Mention the American Bee Journal.*

Wants or Exchanges.

This department is only for your "Wants" or bona-fide "Exchanges," and such will be inserted here **at 10 cents a line** for each time, when specially ordered into this department. Exchanges for cash or for price-lists, or notices offering articles for sale, will not be inserted here—such belong in the regular advertising columns, at regular rates.

WANTED—2nd-hand 16 or 18 inch Planer.
W. A Campbell, Deegan, Ga.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Aug. 25.—We are having considerable inquiry for comb honey. We have as yet received but a few small consignments. We quote: Fancy white, 15c.; No. 1 white, 14c. Extracted, 5@7c.
Beeswax, 25@27c. J. A. L.

KANSAS CITY, MO., Aug. 20.—The receipts of new comb and extracted honey is fair, the demand not large, but will increase with cooler weather. We quote: No. 1 white comb, 1-lbs., 14@15c.; No. 2, 12@13c.; No. 1 amber, 11@12c.; No. 2, 10@11c. Extracted, white, 6@6½c.; amber, 5½@6c.; Southern, 4½@5c.
Beeswax, 22@25c. C. C. C. & Co.

PHILADELPHIA, PA., Aug. 19.—New crop of comb honey is coming in more freely and generally in good condition. Demand is now beginning to spring up. New extracted is arriving in a small way. We quote: Fancy comb, 14@15c.; good, 13c.; fair, 9@11c. Extracted, 4½@5½c. It is hard to get our market to rally after the blow it received in the spring on discovering such a large amount of beeswax adulterated. We quote pure wax, 22@25c. W. A. S.

ALBANY, N. Y., Aug. 19.—The honey market is now beginning, and I think this the best time to sell, especially white grades of comb honey. Receipts so far are light. We quote: White comb, 14@16c.; mixed, 12@14c. Extracted, white, 7@7½c.; mixed, 6@6½c.; buckwheat and dark, 5½@6c.
H. R. W.

CHICAGO, ILL., Aug. 7.—Some of the new crop of comb honey has come on the market, and we have sold same at 15c. There is also sale for the darker grades at 8@12c. Extracted, 5@7c., according to quality, flavor and color. Beeswax, 25@27c. R. A. B. & Co.

CINCINNATI, O., Aug. 7.—Demand is lively for new extracted and comb honey, all old honey being closed out. Arrivals are fair but insufficient for the demand. Comb honey brings 14@15c. for choice white. Extracted, 4@7c.
Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. M. & S.

CHICAGO, ILL., Aug. 23.—Fancy white comb honey (1-lbs.) in nice, clean packages sells at 16c.; other grades of white honey, 14@15c.; amber, 13@14c. We are having a good trade in extracted honey, selling light amber and white at 6@7c.; dark, 5@5½c. depending on quality and style of package. Early shipments to market advised so as to permit of sale before cold weather sets in.
Beeswax, 28c. S. T. F. & Co.

MUTH'S HONEY EXTRACTOR PERFECTION Cold-Blast Smokers,

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Send **10c** for Practical Hints to Bee-Keepers.
Mention the American Bee Journal.

List of Honey and Beeswax Dealers,

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S. T. FISH & CO., 189 S. Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.,
HILDRETH BROS. & SEGELKEN, 120 & 122 West Broadway.
CHAS. ISRAEL & BROS., 486 Canal St.
I. J. STRINGHAM, 105 Park Place.
FRANCIS H. LEGGETT & Co., 128 Franklin St.

Kansas City, Mo.

C. C. CLEMONS & Co., 423 Walnut St.

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BATTERSON & Co., 167 & 169 Scott St.

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CHAS. DADANT & SON.

Philadelphia, Pa.

WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Amalgamation of the North American and the Union.

Query 985.—1. Do you favor the amalgamation of the Bee-Keepers' Union and the North American Bee-Keepers' Association, as proposed in the editorials on pages 444, 445 and 446 of the American Bee Journal?

2. If not, why not?

B. Taylor—1. Yes.

J. M. Jenkins—Yes.

W. G. Larrabee—1. Yes.

Dr. C. C. Miller.—1. Sure.

Rev. E. T. Abbott—1. Yes.

G. M. Doolittle—I am undecided as to what would be best.

Chas. Dadant & Son—1. We do not know of any objection to the plan.

Jas. A. Stone—1. Yes, with both hands up. Why did not some one say so before?

W. R. Graham—1. I would not object to it. 2. "In union there is strength," and that is what we need.

Rev. M. Mahin—1. I have not given the subject any thought, and have no settled opinion concerning it.

M. H. Mendleson—1. "In union there is strength," so I vote for the amalgamation of the Bee-Keepers' Union and the North American.

Prof. A. J. Cook—1 and 2. No and yes, on the principle of "Let well enough alone." It might help both, save machinery, and lose none of its usefulness.

Mrs. J. N. Heater—I. I am sorry to say I am not a member of either, and have not given it much thought; but if one organization could do for both, I would favor it if I were a member.

R. L. Taylor—1. Yes, when a plan of union is sufficiently digested to insure an effective organization. It is a bad omen that there is much more talk about a union than about a plan of union.

Dr. J. P. H. Brown—1. No. 2. Each body has its *separate* and distinct work to do, and *that* work can be more vigorously and profitably prosecuted when under the immediate direction of its special management.

L. Eastwood—The Bee-Keepers' Union, which came into being for a special purpose, and has served that purpose well, I fail to see how it can be benefitted by uniting with any society whose aims are not identical. I say no.

Mrs. L. Harrison—1 and 2. I see no reason why they should not unite, as their interests are identical. "United we stand, divided we fall." I would be sorry to see any harm accrue to the Bee-Keepers' Union, as it has done such good work for our industry.

Eugene Secor—1. I'm afraid I don't. And yet I may be convinced that it ought to be done. 2. I have doubts about the successful union of the two societies. If the Bee-Keepers' Union gets loaded down with more work than it can perform, its usefulness is past. It has something to its credit now. Why not let well enough alone? The North American, too, has done some effective work. The trouble with the latter is, we get it overloaded with a constitution, or its constitution overloaded. It ought to be very short and simple. But I'll not argue. Perhaps the other fellows will overcome my objections to the proposed "marriage."

Allen Pringle—1. Yes, I favor the union, so far as I have anything to say in the matter, for several reasons, the principal one being that the North American would be greatly benefited thereby—placed on its feet, as it were—while the Bee-Keepers' Union need not necessarily be injured.

E. France—1. No. 2. The North American Bee-Keepers' Asssociation is a movable affair. A few men are permanent members, the attendance and members are mostly men that live near by—the next year you have another set, and so on. I think the Union will be stronger by itself. Any one who has any interest in the Union can join it.

J. E. Pond—1. I don't think the associations should be amalgamated. 2. The object of the Union is special, its purposes are defensive. I do not think that in this case union would be strength. In some respects they might, and probably would be antagonistic. The Union is all right. Let the members of the association join it as individuals, and thus preserve the Union as a power.

Wm. M. Barnum—1 and 2. Competition is the life of every business. It may stimulate the quiet ones to better efforts, if a little healthy competitive enthusiasm is worked up. Then, again (and here I presume I disagree with some), I should prefer that each nation have its own representative and *independent* association. I am not in favor of it; as above stated reasons explain.

Wm. Muth-Rasmussen—1. If I remember correctly, I have been a member of the Bee-Keepers' Union since its inception. I am in favor of joining the Union with the North American Bee-Keepers' Association. If the annual fee could be fixed at $1.00, and each member get the American Bee Journal free (the Association to pay for it), I think it would bring a large membership.

C. Theilmann—1. I vote no on the question. 2. We have a good Union, with money and good management. We don't know whether we will have such by amalgamating the two. The past has scored victories for the Union. What has the North American to show? It is like a colony of bees that has the swarming-fever, and is waiting for stores, while a good colony is filling the hive with surplus. No, no! No amalgamation for me.

G. W. Demaree—1. I feel very little interest in the question as to its substance. But decidedly, *No*. 2. Simply because the two institutions are entirely separate and dissimilar as to purpose. The North American Bee-Keepers' Association has for its purpose the work of popularizing bee-culture, while the Union was formed to defend the rights of bee-keepers before the law. A union between the two would destroy the influence of both.

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Queens, 75 cents, or two for $1.00.

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Tested	each	$1.50
"	per ½ dozen	8.00
Warranted purely-mated	each	.75
"	per ½ dozen	4.25
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Friends, I will have 200 Select Tested Queens for sale Sept. 1, at $1.00 each or $10.00 per dozen. Untested, 50 cents each, or $5.00 per dozen. Tested Queens 75 cents each, or $6.00 per dozen, either Golden Italians or Imported stock at same price. Safe arrival and satisfaction guaranteed. Address,

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I will send a Guaranteed 5-Banded Yellow Queen, bred from a Breeder selected from 1000 Queens (some producing over 400 lbs. of honey to the colony); or a 3-Banded Italian Leather-Colored Queen direct from a Breeder imported from Italy. Oct. '94—**at 75c.,** and a special low price for a quantity.

My secret is to sell an extra-large amount, which enables me to sell at low prices. Will run this spring 350 Nuclei—have 1 home and 4 out apiaries. No Queens superior to my Strain.

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Untested Italian Queens, by return mail, 75c; Tested, $1.00; Select Tested, $1.50.
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One Colony of Italians on 9 Gallup frames, in light shipping-box	$7 00
Five Colonies.....	30 00
Ten Colonies.....	50 00
1 untested queen.	1 00
6 " queens	5 50
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3 " Queens.	4 00
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Select tested queen, previous season's rearing.. 4 00
Extra Selected for breeding, THE VERY BEST.. 6 00
About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.

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Have been carefully bred for producing comb honey for the past 18 years, and by a special method for producing large, long-lived, prolific Queens. Can furnish either 3 or 5 Banded stock, bred in separate yards. 3-Banded bred from my own or Imported Mother. No foul brood or paralysis. Warranted Queens, purely mated, 60 cts.; Tested, $1.00; Selected Breeders, $2.50. Discount on quantities.

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Until further notice I will furnish **COMB FOUNDATION** as follows :

10 lbs. Heavy or Medium Brood Fdn.	$3.50
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I sell Dadant's Foundation at their prices; pay CASH for BEESWAX, and keep a stock of

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Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. VAN DEUSEN & SONS,
Sole Manufacturers,
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Will be made on the Foundation sold by us this year. That is why

WE NEED BEESWAX.

Now is the time to order your Foundation for 1896. Although the

PRICES ARE REDUCED

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The Beeswax You Have to Offer.

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Mention the American Bee Journal. **HAMILTON, Hancock Co., ILL.**

THE CONVENTION

Will of course take me away from home a few days, but customers need not hesitate on that account in sending for queens, as I shall leave the nuclei well-stocked with Queens, and Mrs. H. can fill orders just as well and as promptly as I can. **"By Return Mail"** will be the motto just the same whether I am at home or not. Single Queens, $1.00; six for $5.00. One Queen and REVIEW for $1.50; one Queen and the book "ADVANCED BEE-CULTURE," for $1.25: Queen, Book and REVIEW, $2.00. Remember that the Queens are bright, young tested Queens, strictly first-class in every respect.

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Eddy, N. Mex. J. SINGLETON.

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THE OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS

35th Year. CHICAGO, ILL., SEPT. 5, 1895. No. 36.

Five Representative Bee-Women.

No. 1.—Mrs. L. Harrison.

No. 2.—Miss Emma Wilson.

No. 1.—Mrs. Harrison needs no introduction to the readers of bee-literature. For years she has unceasingly used her voice and pen in disseminating apiarian information. Her name has from the first been among those who reply to the Question-Box conundrums in the Bee Journal. Her home is in Peoria, Ill.

No. 2.—Miss Wilson is Dr. Miller's good sister-in-law, and competent assistant in his apiaries at Marengo, Ill. She writes quite frequently for Gleanings. To know her is to admire her for her strong womanly qualities and genuine good-heartedness.

No. 3.—Mrs. Sherman, of Salado, Tex., is probably the best-known bee-woman of the South. Her very countenance bespeaks goodness and kindness of heart. In 1888,

No. 3.—Mrs. Sallie E. Sherman.

from 40 colonies of bees, she alone took 6,000 pounds of honey, mostly extracted, and 100 pounds of wax. Though she seldom writes, her bee-articles are very helpful and entertaining.

No. 4.—Mrs. Axtell is another of Gleanings' popular contributors, though having written occasionally for these columns in years gone by. Although not a prolific writer, she is practical and interesting. In 1882, from 180 colonies she (and her husband) secured 30,000 pounds of comb honey. Mrs. Axtell lives at Roseville, Ill.

No. 5.—Mrs. Heater is another whose name is found in the list of bee-experts represented in the Question-Box of this journal. Her apiarian experience dates from 1881, and for the last 12 years her

No. 4.—Mrs. Sarah J. Axtell.

"Eureka Apiary" has numbered 125 to 150 colonies. She is one of Nebraska's honored bee-sisters, her home being at Columbus.

No. 5.—Mrs. J. N. Heater.

Contributed Articles.

On Important Apiarian Subjects.

Underground Bee-Cellar—How to Make It?

BY G. M. DOOLITTLE.

During, and at the end of every winter in which there is long-continued cold weather, reports come in of great mortality of bees, and as the last winter was one corresponding to the above, though not so long-continued as was that of 1882–83, in which nearly 75 per cent. of all the bees in the United States perished, yet there was cold of sufficient duration to cause the reports of heavy losses to come forward in sufficient numbers to show that the colonies of bees in the Northern States depreciated fully 25 per cent. since the previous fall, among those colonies which were left to "while winter away" on the summer stands. These losses cause the bee-keepers' eyes to be turned toward cellar-wintering, and as I have been quite successful in wintering bees in a wholly underground bee-cellar, I am requested to give a description of the same in the American Bee Journal.

At the west side of my bee-yard is a small knoll into which I dug a hole 24 feet long, 8 feet wide, and 11 feet deep at the back end, and 3½ at the front. I next dug a trench all around the outside of the bottom of this hole, the same being 8 inches deep at the southwest corner, and 20 inches at the northeast corner, from which the drain went, so as to make the bottom dry, if it ever should become so wet that water ever came into it. This trench was filled with fine stone, and on these stones was built a wall of mason work, one foot thick, and six high, very much as any cellar-wall is built, except as to thickness. In this way the floor or dirt bottom of the cellar is always free from water, or comparatively dry, although it is never so dry that dust will form.

On the walls, pieces of timber 4 by 8 inches were placed, so as to form plates for rafters, which were made of 2x8 hemlock, and placed about 18 inches apart so as to hold the great weight of dirt which was to be placed over the roof. On the rafters were nailed common inch hemlock boards, the joints between the boards being made tight enough so that no dirt would rattle through. Over these boards, or this inner roof, dirt was put on so that there was no place where the earth was less than three feet deep. This whole work was done in a very dry time, and the dirt put on over this roof was so dry that the dust would fly in shovelling it. To keep this dirt dry (as frost will not penetrate dry earth nearly so deep as it will damp or wet earth), another roof was placed, made of rough hemlock lumber, the boards running up and down, with the cracks battened, this being much larger than the inner roof, so as to carry the water out beyond the dry earth some distance, so it would not soak back into the dry earth.

A ventilator was placed on the rear end, having a throat 6x8 inches in size, and a sub-earth ventilator was provided, coming in at the front end, the same being 100 feet long and 4 feet deep at the cellar end, by 18 inches deep at the outer end, this making an average depth of about 2½ feet, so that the cold outer air would be quite materially warmed in entering the cellar. These ventilators had gates or doors in them so that the ventilation could be controlled from none at all to the full capacity of each. In high cold winds I had to keep all closed, or the temperature of the cellar would be caused to run down to the freezing point or below, while in still, warm weather there would be little if any circulation through either. The regulating of these ventilators made so much work that I gradually began to leave them closed, for a short time at first, then longer, until one time, at the end of a month, I could not see but what the bees were just as well off as they were when I was spending much time in manipulating the gates in them. This resulted in my leaving them closed all the while, and I found by doing so that the temperature in the cellar did not vary two degrees in all winter, no matter whether it was 30° below zero outside, or 60° above.

After a time I found that my hemlock roof was getting rotten and must be renewed, which was done, but as this last held no longer than the first (the time being only about five years in either case), I decided to make this inner roof of something which would last as long as I lived, so about six years ago I covered it with flagstone, the same taking the place of the inner roof, as this was the one which decayed so often. In putting on this flagstone roof I made no provision for ventilation, and during the past five winters the bees have been remarkably quiet, and wintered extremely well with no air entering but that which came through the flagstone roof, the walls of mason work, and the wooden doors.

The wall at the entrance was run out six feet, and only wide enough to take a door frame, using a common door. In this space I use three doors, so as to enclose two dead air spaces when the three are shut, while at the end of the wall is a little room which I call an "ante-room," this having a door also; yet with all this provision the inside of the inside door is the coldest place in the whole cellar, when all are shut.

In this cellar the bees enjoy one long, totally dark night, the night lasting from about Nov. 5 to the 15th, when they are put in, to April 20 to the 25th, when they are put out; while during all this time the temperature keeps an even 43° to 45°. I consider that this keeping of an even and uniform temperature has very much to do with successful cellar-wintering, and had I a cellar whose temperature could not be kept within the bounds of from 40° to 48°, standing the most of the time at from 43° to 45°, I would prefer to leave the bees on the summer stands in chaff-packed hives.

Borodino, N. Y.

Bee-Keeping in Southern California.

BY DR. E. GALLUP.

In the first place, one should locate his apiary in a sheltered locality. To illustrate:

The apiary that I managed two seasons in Ventura county was located on rather a high point of land, slanting to the east. The west side of the apiary was fully exposed to the prevailing coast breeze. It was almost impossible to get a young queen fertilized and back into her hive, and a large proportion of the working force was unable to make headway against the wind and get to their hives. The consequence was, the east side of the apiary was always strong with bees, and produced the largest amount of the honey. I could extract from the east side oftener than from the west. The apiary could have been located but a short distance west, on lower ground, and where they would have been protected from the prevailing wind by large live-oak trees, and it would have been a great sight more satisfactory to me. The first season a young man had his bees all on the west side, and the consequence was he lost some 30 or over of his young queens, and I have no doubt that at times I got a large share of his working force.

The second season I put all my increase on the west side, and lost nearly every young queen. The young man moved his bees to a new locality.

Many of our California bee-keepers pay but very little attention to their bees—only at extracting-time, and then they take out all the honey they can get, and leave them the balance of the year to work out their own salvation. But there is a vast difference between that kind of bee-keeping and the man who keeps his bees in the right condition, and gives them all the necessary care and attention. To illustrate:

Mr. Andrew Joplin started in this season with 150 colo-

nies of bees, in rather poor condition, owing to the past season's entire failure. He made new hives, and transferred nearly half his bees so as to get them into a different hive, on different sized frames, etc. He destroyed all the old, black combs, and replaced with foundation, using altogether nearly 300 pounds of foundation. He made all his increase by building up nuclei, so as not to draw on his working force. He is rather a slender young man, not extra strong, and he sums up 23 tons of honey, 200 colonies of bees in excellent condition, and two tons more of honey yet in the hives to extract; and all this with the assistance of a young boy to chore about, turn the extractor, etc. He let the bees get the start of him in the forepart of the extracting season, and could not keep up with them and extract as often as he should have done. In my opinion, transferring, and giving the bees foundation, was an advantage, as it gave the queens abundance of room to spread themselves, right in the height of the breeding season. The consequence would be an extra-large force of workers to gather the nectar when it came.

Mr. Joplin's apiary is located in Bell canyon, protected on all sides from winds. His apiary and Mr. Miller's, about one mile south, are the only apiaries in that canyon, and it is an excellent location.

I had the 10-frame standard Langstroth hive, and 8 frames in the super, and my plan was to have the whole 10 frames filled with brood, and all good and prolific queens, before putting on the supers. If a colony did not fill up with brood soon enough to suit me, I would draw full frames of brood from other colonies, and fill my extracting colonies with brood, and let those that I drew from fill up at their leisure. By this practice I secured 3½ tons of honey the second season in Ventura, when my neighbors got nothing, and in the fall I had all my bees in excellent condition. I want an extra-large force of workers, and on such a colony I can place two supers, and have both filled, while an ordinary colony will only fill one; and in many cases I could extract twice from the large colony to once from the other. When we have such an extra-strong colony, they do not restrict the queen in breeding, but take possession of the super at once, and let the queen spread herself, and that suits me. Santa Ana, Calif., Aug 10.

What Dr. Miller Thinks.

Capacity of Brood-Chambers.—There ought to be some definite understanding as to the way of estimating the capacity of brood-chambers. On page 534, C. W. Dayton says he has arrived at 2,000 cubic inches as the proper size of a brood-chamber. That's just what the lamented Quinby said years ago, but his 2,000 inches meant a very different thing from that of Mr. Dayton. Quinby estimated the space occupied, or to be occupied, by the combs, and Mr. Dayton adds thereto the space occupied by the frames and the space about the frames.

Mr. Dayton speaks of his 16-frame Gallup hives measuring 24x12x12, and calls their capacity 3,466, a mistake of 10 inches in figuring having probably been made. Now if you estimate the top-bars, bottom-bars and end-bars of those 11¼x11¼ frames at only ¼ inch thickness, I think you will find that according to Quinby's way of computing, the cubical contents will be more than 2,773, and you will see that Mr. Dayton makes it about a fourth more than that.

I believe the right way to measure the cubical contents is Quinby's way, and the measuring should be done inside the frames. If we take the measurement of the hive with no frames in it, then we have no fair means of comparing the contents of two different hives. For in two similar hives, if one has thick and the other thin top-bars, then one will hold less comb than the other. Suppose we take the common Dovetail hive with ⅞-inch thick top-bars, and compare with it another of the same dimensions only ½ the height. Will the smaller contain just ½ as much as the other? Not by any means, if rightly measured. It will only hold about ⅝ as much.

Brood in 8 and 10 Frame Hives.—On page 534, C. W. Dayton applies the same conditions to the outside combs of 8 and 10 frame hives. As a result of observing hundreds of cases, I find my bees put very much more brood in the outside combs of the smaller hive, so that instead of figuring that the smaller hive will have two frames less of brood, it will be nearer the truth to say it has one frame less.

Dark and Light Linden Honey.—In the well-written article on page 535, Mr. Hahman speaks of two kinds of linden honey, one of an amber shade, and one of lighter color and inferior flavor. That's something new to me, and I'd like to know whether there is no mistake about it.

Preventing Swarming.—Rev. W. P. Faylor mentions on page 536 three things he does to help in the prevention of swarms. I have less faith than I formerly had in keeping out drone-brood and in changing brood-frames, but I have a good deal of faith in the plan of giving abundant ventilation under the whole of the hive. Years ago it was a common practice with box-hives, and this summer some of my hives have been raised up and an inch block placed under each corner.

Cutting Out Drone-Comb.—Isn't there a little misunderstanding between P. A. and Dr. Brown on page 542? The Doctor is talking about cutting out drone-comb in the brood-chamber where it will be a detriment, and P. A. is talking about it in a super over an excluder where it can do no harm.

Strawberry Pollination.—"I want to suggest that it is a little dangerous to tackle these botanical questions unless you are keeping yourself well read up on the subject," says Bro. Abbott, page 543. I well know that, and that's why I am just a little careful about making positive statements, and only ask questions, as in the case of the question I asked him lately, whether a pear seed from a pear tree grafted on a quince would produce a quince tree. I am watching with some interest to see his answer, so as to know what is the up-to-date practice of seeds nowadays.

But when a man is ignorant, and wants to keep himself "well read up," I suppose he is always accorded the privilege of asking questions of those who are well read up. I confess ignorance; I'm not well read up, and now I turn hopefully to Bro. Abbott with a question to which I hope he will give a direct answer, yes or no: Can you raise a crop of Crescent strawberries with no staminate blossoms within a mile?

High-Grade Hybrid Bees.—James Wood writes that he thinks the apparent clash between himself and B. T. Stone, as commented on by me on page 519, may be reconciled by supposing that by high-grade hybrids Mr. Stone means what we call leather-colored Italians. It hardly would seem so from his speaking of "3 and 5 banded bees," and then saying hybrids are better, that he could be confusing the two, but Mr. Stone can say for himself whether he means 3-banded leather-colored, pure Italians, or hybrids. Mr. Wood thinks if I could see some of the apiaries of hybrids in eastern New York, and then step over the mountains into Cary's Italian apiary, and see him work without veil, and rarely get a sting, and then see his bees work beside these hybrids, I would jump at a conclusion pretty quick. Marengo, Ill.

☞ See "Bee-Keeper's Guide" offer on page 575.

"Dividing Colonies for Increase."

BY W. D. FRENCH.

Dr. Miller, on page 422, says: "I would like to ask whether the plan proposed by W. D. French, on page 392, that is, keeping bees on five frames through most of the season, has been followed for a series of years, and has produced good results. The general teaching has been that such 'swarms' would be rather small and undesirable."

Well, Doctor, I am of the opinion that to continue the method as described, for a series of years, would have a downward tendency, which, of course, I would not advocate; although queens produced in the manner described, limiting the number of cells, are superior to those of after-swarms, that might issue in the natural, go-as-you-please way.

Do not understand me as practicing increase as suggested, for I am a practitioner of a large hive, and should I desire to breed for increase, I do so by the introduction of mature cells, bred from my best stock.

I use the Langstroth frame, and, for extracting, operate as in the production of comb honey, namely, tiering up, using 33 frames to the hive, 9 in the brood-nest, and 8 in the upper apartments, beginning the season with one story, and ending in the same way.

I do not begin extracting as early in the season as those who operate by "skinning" their bees on the first round, but take off my honey at a time when the fact is not discovered by the inmates of the hive, thus encouraging them on to victory, as it were.

A person with eyes somewhat impaired, passing through my apiary in the heart of the season, would, if not reminded of the fact by the bees, think he was passing through a cemetery of monuments to dead heroes. Foster, Calif.

Getting the Wax Out of Old Comb.

BY JOHN CLARK.

Bee-keepers have found the work of rendering old combs into good, salable wax troublesome, discouraging, and sometimes too slow and too expensive an operation to "fool with" to any great extent. I have been keeping bees for a great many years, and such has been my experience. But recently, while experimenting, I discovered a plan which obviates the many difficulties which face a novice, or even an "old hand," to get the best results with the least work, and at the least expense; and for the benefit of the readers of the American Bee Journal, I will here give the plan I now use to get wax from my old comb.

I took an old feed basket—one that would go inside of the can, which I mention further on; gathered all the comb I wished to dispose of at one time, threw it into the basket, and carried it to the steam escape-pipe of our water-works. Here I provided myself with an old lard-can, holding five gallons or more, and cut a round hole the size of the escape pipe in one side of the can about three inches from the bottom. Then I placed about two inches of water in the bottom of the can, put the end of the escape-pipe through the hole in the can, set the basket containing the comb in the can, covered the top of the can with an old piece of carpet, turned on the steam, and in from three to five minutes the work was complete.

Then I lifted out the basket, after giving it several vigorous shakes, and threw away the *debris* with every bit of the wax removed, and lying on the water in the can. I let it lie there until cool, and then took it out in one solid cake of comparatively clean, pure wax.

Any one trying this plan as I have outlined it, will find no wax remaining in the slumgum or refuse, and but very little dirt or trash in the wax—not enough to injure its sale.

I have tried the sun-extracting plan, and, in fact, a great many other ways, but have never yet found anything that will begin to equal this for speed, convenience and good work. There is scarcely any one keeping bees but can have access to a steam escape-pipe in some shop, mill, or at some thresher where steam is used. By this process, one could load a wagon with comb, a basket, can and carpet, go to some escape-pipe, and extract the whole load alone in much less than a day.

I can truthfully say to any one wishing to get the wax from old comb, that this is the best, the cheapest and easiest way discovered, and can be readily utilized by any one at no cost. By following the method I have outlined above, every bee-keeper and honey-seller will find it saving in time and trouble, and the work a pleasure instead of laborious; and the work, when done, will be as nearly perfect as it is possible to get it. Liberty, Ind.

Something About Mental Pigeon-Holes.

BY WILDER GRAHAME.

"There are papers and papers galore. Hints in profusion, and books in confusion. But where, oh where, in all this mass of undigested food is an ignorant amateur to turn for a good old-fashioned meal without trimmings; in other words, a start? The whole thing is a complete jumble to me, and I am like a waif turned loose in some great city without the least knowledge of right and wrong. Where can I go to get enlightened; to start right?"

So writes a friend, and I am more than half inclined to think his plaint has origin in something more substantial than a passing fancy. One may avoid ever being confused in the midst of confusion only when entire master of the situation. In fact, I really have known instances where old bee-men became somewhat "rattled" in the midst of conflicting theories. The amateur, we will suppose, sits down with a late copy of some reliable bee-periodical, and opens the page to a leading article. It is about some subject of which he knows absolutely nothing; that is why he is reading it. He expects by a careful study of that article to fully understand one subject in the business. True, he finds a good deal depending upon the possession of a previous knowledge that he has not. Never mind. He will read the article and absorb what he can of it. He does, and then, congratulating himself on his accumulating stock, he turns the page and reads a second article, not only flatly contradicting the first, but bringing out such wholly different principles of natural history that he instinctively turns back to see if the first sketch might not have been written about pigs instead of bees. Do you wonder he gets discouraged?

To such letters as the above sample, I usually reply somewhat as follows:

"From out this discouraging assortment of disorder select some one book. If it is the best one, so much the better; if not, better than so much. Only see that he has some sort of chronological, ornithological, or almost any other kind of order; for a little jumble is sometimes worse than a big one. It is just as indigestible, and does not contain half so much truth. Now study this book and learn it, whether you believe it or not. Only, mind you, unless you intend to profit by it as I shall herein direct, all previous engagements shall be, and the same are hereby declared canceled. You are not by any means to use this single volume, good or bad, as your sole guide; only as a sort of pigeon-hole case in which to file away the results of future study. Once provided with the necessary pigeon-holes, one can sit down and sort out as much of the original mass as he sees fit, and then out of the contents of any one of his mental pigeon-holes, deduce a theory of his own and go ahead."

Seriously, the confusion does not arise so much from the supply of matter as from a proper knowledge of systemizing and applying it. And, come to think of it, the difference between the professional and the amateur is not so much in what they know as in how they know it; whether their knowledge is part of a system or of a jumble.

Canadian Beedom.

Clipping Queens' Wings.

Dr. Miller, on page 519, does not take the point made as to lessening the wing-power of queens. There is a law in Nature that ability is lost by disuse. It has an extreme illustration in the eyeless fishes found in the Kentucky Mammoth Cave. They once had eyes, but having no longer any use of or for them, have lost the organs themselves. The point made is that clipping deprives queens of the power of flight, and that organs not used are likely to deteriorate. As to cutting hair compelling the Doctor's posterity to wear wigs, there is no analogy between the two cases, because cutting hair has the effect of making it grow faster and thicker, whereas clipping a queen's wing stops all growth and use of the organs of flight.

"Ripeness and Over-Ripeness of Honey."

An article with the above title appeared in the Rural Canadian for August. The "ripeness" part of it is good, but the "over-ripeness" is open to question. The writer, S. W. Sears, tells us honey may get too ripe, and that it "should not be allowed to remain one day after maturity is reached." "Remain" presumably has reference to the hive. He says, "the honey is ripe and it does not improve by standing." There is no doubt a stage in its history when honey gets ripe, but it is a mistake to suppose that after the point of ripeness is reached honey suffers deterioration by remaining in the hive. It will keep there all right for years and years. Old bee-hunters, who have taken trees with large quantities of honey in them, know very well that none of it is any too ripe. O, what thick, luscious, delicious honey was taken from bee-trees in old times! How long it had been stored, who can tell? I believe that honey, like wine, improves with age. If, as this writer alleges, "it does not improve by standing," most assuredly it does not deteriorate.

It is too much to expect, as this article teaches, that a bee-keeper should have such nicety of judgment, as to be able to tell the exact day when honey ought to be removed from the hive. We are told he is to do this by "intuition." "He may not be able to tell why he gathers the honey to-day or to-morrow, but he knows it is ready." There is no intuition needed. When the honey is ripe, the bees seal it over. That is their finishing touch which proclaims that it is ready for market, or for use. While there is an excess of water in the honey, the bees will not seal it over. They will leave it to evaporate. This process of evaporation is the ripening process. As it goes on, the honey gets thicker and heavier, until it has reached the proper density. Then, as already remarked, the bees certify to its ripeness by sealing it over.

Some bee-keepers think they can ripen honey as well as the bees, if not better. So they provide tanks where they leave the honey to undergo the evaporating process. The hive is the best place for this process. It is very doubtful if a large body of honey in a tank will evaporate as perfectly as it does by the cell-full. Neither is the changeable temperature of the outside air as favorable for the ripening process as the steady, warm temperature of the interior of the hive.

There is a large proportion of unripe honey put on the market, to the great injury of the business of bee-keeping.

This unripe honey is thin, watery, and liable to go sour. It is supposed by a certain class of bee-keepers that they are doing a cute thing to get the honey extracted before the bees go to the trouble of sealing it over. This is the poorest policy imaginable. It is an attempt to gain profit at the sacrifice of quality, whereas it should be the constant aim to get the highest quality, because that invariably commands the best price, and gives the most satisfaction to customers.

Fighting Hybrids—Late Swarming.

I read some time ago of a bee-keeper who thought it a disgrace to wear a veil while handling bees. Well, I think if he had been in my place the other day, he would have been very glad to have one. I have a colony of hybrids that have always wanted to run things to suit themselves. They did not swarm this summer, and there are bees enough in the hive to make two or three average colonies. However, they had too much drone-comb, so one morning I walked out, pants in socks, smoker in hands, veil on face, and purpose in head.

I puffed some smoke in at the entrance, and waited for them to fill themselves with honey. It is generally believed that bees are then much easier handled; not so in this case, however. I was surrounded by a swarm of the angriest bees that ever took wing. I could smell formic acid in the air. I placed a new hive, containing full sheets of worker-foundation, on the stand, and proceeded to remove the frames from the old hive, and shake the bees off in front of the new one. Before they were down they were up and at me like a nest of yellow-jackets, sticking to my veil, arms and legs like grim death, some getting under my socks and stinging through my pants; others up under my coat, and two or three succeeded in getting their business end against my face. This caused me to beat a hasty retreat, leaving them in possession of the field till I got the bees out of my bonnet.

Returning to the combat, I managed to get the bees all off the combs, and placing the old brood-chamber on top with a queen-excluder between, I made for the bath, where I gave myself a good washing with salt water. I can recommend this to anyone who has been badly stung about the body and limbs, as I felt none the worse for it, and must have been stung more than twenty times.

A SWARM THAT ISSUED AUG. 18.

I had a swarm issue to-day—Aug. 18. They came out about noon and clustered on a tree, so I hived them on drawn combs in a new hive. The hive they came from was an 8-frame one with two supers on it. The supers were full of buckwheat honey, not much of it sealed. The bees were Italians, and a very strong colony. Can anyone tell what caused them to swarm so late in the season? The same colony cast a fine swarm June 1. GEO. MCCULLOCH.

Harwood, Ont.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Starters in Wired Frames.

When only starters are used, will the bees build over them straight combs? SUBSCRIBER.

ANSWER.—You can't depend on good work with wires and no foundation except a starter.

Transferring—Ants and Bees—Dividing Colonies, Etc.

1. I have 13 colonies in box-hives, which I wish to transfer into new hives. When is the proper time to transfer them? and what is the best method?

2. Do hives need ventilation? If so, how should it be done?

3. What is the best method of rendering wax?

4. As we have rains here in the spring our best honey-plant (cleome) grows only on the banks of irrigating ditches, and in other wet places, would you advise that it be sown where it could be irrigated? It is good for nothing but bee-pasture.

5. My bees are frequently bothered with a large black ant, which, if let alone, will destroy a colony in a very short time. How can I most successfully fight them?

6. Will you kindly give me a few pointers on dividing bees? I believe I should prefer dividing to natural swarming?

7. As there is considerable discussion over the 8 and 10 frame hive, what do you think of using the larger hive, and if the queen is not prolific enough to utilize all the room, let the workers fill the balance with winter stores?

Aztec, New Mex. J. P.

ANSWERS.—1. Transferring is usually done during fruit-bloom. It is rather out of season to discuss the manner now, and it is best to study up the subject in a good text-book. Don't think of getting along at bee-keeping without a good bee-book.

2. Ventilation is very important, but an entrance large enough will probably give all the ventilation that is needed. An entrance of six square inches or more is none too large.

3. In a sun extractor.

4. I doubt if it will pay to occupy tillable ground with any plant that has no value except as a honey-plant.

5. I know nothing about them from experience, but I have read of having the legs of stands or hives standing in little dishes of water. Possibly there may be some drug that will drive out the ants without driving out the bees.

6. As you will hardly want to do any dividing before another season, the very best pointer I can give you is to take advantage of the opportunity of getting from the American Bee Journal office Root's "A B C of Bee-Culture," read up, then ask me about any points that are not clear. [The "A B C" is sent postpaid for $1.25; or with the Bee Journal a year—both for only $2.00.—EDITOR.]

7. That's an open question, and I wouldn't like to be very positive about it, but I'm inclined to think the plan may be all right.

Buying Bees in the Fall.

Would it be best for me to buy bees now at $4.00 per colony, or wait for spring and pay $7.00 or $8.00, working for increase and saving money? I have a nice place to winter them in. W. F. M.

Lynn, Mass., Aug. 11.

ANSWER.—Better buy now, if you think you can bring through the winter more than half your number.

Amount of Winter Stores Per Colony.

How much should an ordinary colony of bees, in 8 Hoffman frames, weigh to winter? They are flying almost every week in winter here, but there is no honey from September to May. A. P. G.

ANSWER.—Last fall I fed up mine until each weighed 50 pounds, just weighing the 8-frame hive with cover, without any bottom-board. Your bees have about as long a pull without gathering, only yours have a weekly flight while mine stay in the cellar for five months. So I suppose yours will use more stores, possibly five or ten pounds more, but that's a mere guess.

Larvæ Used in Rearing Queens.

I noticed your reply to H. P. J., on page 491, and have decided to give one of my experiments, to-wit:

In preparing a batch of queen-cells, I selected larvæ from the smallest that can be transferred, up to the largest size that is surrounded by an abundance of the milky food, all from the same queen, and one that always duplicates herself in queens without any black on the tip, if the larvæ is the right age, and had them hatched out in a queen-nursery. Those that hatched out on the 11th and 12th days (counting the day the cells were prepared and the one of hatching) appeared to be all right, but those hatching on the 13th and 14th days, counting the first and last, had black tips extending up on a portion of the fifth band, and were smaller than the others, which proves to my satisfaction that there is a mit beyond which it will not do to go, in selecting larvæ, regardless of the quantity of food surrounding them. I have noticed the same difference in the queens when queenless bees were forced to select an old larva from which to rear a queen.

The best queens will hatch out on the 12th, from cells prepared on the first day of the month.

My conclusions are, that you will get a fair queen from a larva of any age if she hatches out in 16 days from the time the egg is laid; but if not retarded by cold in development, and it takes longer, she partakes somewhat of the nature of a worker. Do you think I am right? W. H. P.

ANSWER.—I believe it is understood that for the first three days a worker-larva is fed the same as a queen, and during the remaining two or three days the food is different. Now if a larva is selected after the change in food has been made, I should not expect so good a queen. A larva that does not turn out a queen under 14 days, must be at least 17 days from the laying of the egg, and that delay doesn't promise well for the quality of the queen. And I suppose it is reasonable to believe that after the change of food has been made, the older the larva the longer it will be before it emerges from the cell.

The Length of Bees' Memory.

I removed surplus from two hives and stored it in an upper room of my dwelling, about 150 feet from the apiary. The bees soon found it, and began carrying it back to the hives. The next day I smoked them out and closed the windows; but they did not cease to fly to the spot for three weeks. Is this the limit of a bee's memory? W. G.

ANSWER.—Hardly. Sometimes they remember the old stand on which they formerly stood, after being in the cellar a number of weeks. Their stopping their visits at the end of three weeks doesn't show they forget the place, but that they had too much sense to fool away any more time there. Just give them the same chance a week after their visits ceased, and see if they don't remember.

Fears Danger to Bees from a Cider-Mill.

A cider-mill has just located a little more than ½ mile from me, and I wish to know whether the danger to my bees is really alarming. An old bee-keeper near says it will be almost sure death to them. The drouth has been so severe there are no fall flowers. What would you do under the circumstances? My crop of honey is so light that I cannot afford to lose any bees if it can be avoided. H. M. S.

ANSWER.—Several times a cider-mill has been run equally near me, and I suppose a good many bees have been killed thereby, still the colonies have remained of pretty good strength. I am inclined to the opinion that the law should oblige those who run cider-mills to enclose them against the entrance of bees, but there is no such law, and the owners of the mills would no doubt think it the business of the bee-keeper to keep his bees away. Possibly by furnishing material for enclosure, in the shape of netting of some kind, you might have the bees kept out.

Spacing of Brood-Frames.

Have you ever experimented with brood-frames spaced less than 1⅜ inches from center to center? If you have, I would be glad to hear with what success.

I have seen the inside of a number of box-hives, and have been struck with the close spacing of the center combs (the average does not seem to be over 1 3/16 inches), and it seems to me that this greatly favors early spreading of the brood, and consequently accounts, at least in part, for the large and early swarms usually cast by colonies in these hives. Surely, a given number of bees would cover more brood if crowded into a 5/16-inch or ¼-inch space than they would if they had to fill 7/16 inch spaces, as they must in hives where the frames are spaced 1⅜ inches apart.

I suppose this ground has been gone over before, but I can find no mention of it in any of the books that I have.

E. R. H.

ANSWER.—I have never experimented in this line except incidentally, or accidentally. I am inclined to think that a more extended and careful observation will decide you that in box-hives the average spacing is more than 1 3/16. The observations of others give it a good deal more. I think it quite possible that during the hot season brood would be reared all right if frames were spaced 1¼ or less from center

to center, but at that time little heat is needed from the bees, and the same number of bees would cover just as many combs if spaced 1⅛ inches from center to center, and they would rear just as much brood in one case as the other.

In early spring, however, the case is different, and brood will be found in only as many combs as the bees can cover well when compactly clustered. You are right in saying, "a given number of bees would cover more brood if crowded into a 5/16 or ¼ space than they would if they had to fill 7/16 spaces. But you have lost sight, apparently, of another very important factor, and that is that you may have the frames crowded together until the mass of bees between the combs shall be too small to generate a sufficient amount of heat. And that factor must be considered in deciding how far you can crowd.

Uniting Colonies—Getting Honey from Box-Hives.

I bought 2 colonies last spring, in old-fashioned square hives. One swarmed three times; No. 2 and No. 3 the next day. They built some comb, but seemed very dull. I found they had no queen. I fed sugar syrup, as they had no honey. I fed for two weeks, then put them on top of No. 1, which were working nicely. They seem to be all right there. I made holes for communication. Did I do right? How can I get honey from the old square boxes, and not injure the colonies? A. A. L.

Verona, Ont., Aug. 12.

ANSWER.—Your bees would probably unite all right as you did. Bore one or more holes with an inch or 1¼ inch bit in the top of the hive. It may bore into the combs, but no matter. Then put on one or more surplus boxes, and make a cover large enough to fit over all. When they swarm next summer you can put the swarm into a hive with movable combs.

Going into the Bee-Business.

I have been thinking strongly of going into the bee-business. How much capital will it require? How much ground, and what localities are best? This is my first attempt, and I don't want to fail. Now if I'm not asking too much, you will confer a great favor by giving me a few suggestions.

MRS. H. C. T.

ANSWER.—Probably you will do well not to make any investment at present beyond a bee-paper and a text-book to study between now until next spring, for it is pretty late to start in bee-keeping this year. Then in the spring you will need to invest enough to buy two colonies of bees, and you can tell better than I what you can get them for in your neighborhood. You will need to invest a dollar or so more for veil and smoker, and that will be enough to start on. As to other points, you will be in better shape to receive suggestions after your winter's study, and any points that are not clear then, I shall be glad to throw light upon if I can. I might say that you will need a square yard or so of ground for each colony.

Rearing Queens and Drones.

1. I have a queenless colony of bees, and on Aug. 6 I gave them a frame with brood ranging from newly laid eggs to hatching bees. How many days before I should have a laying queen?

2. If I feed them, will they be strong enough to go into the winter?

3. Can the bees develop queens and drones from any egg if taken at the right time? or are a certain proportion of the eggs, queen and drone eggs, to be developed if needed, and if not, then to be destroyed? AMATEUR.

Weeping Water, Nebr.

ANSWERS.—1. I would hardly look to find out before about three weeks after giving the brood. The queen may be laying before that, but sometimes they are longer, and it's a good deal easier to decide the case after eggs are somewhat plenty.

2. That depends. If they have dwindled down to almost nothing before the queen lays, no. If they are yet strong, yes.

3. No; if an egg is impregnated it may produce a queen or a worker, but never a drone. If unimpregnated it can produce nothing but a drone. It will pay you well to get a good bee-book and read up on this. As a rule, no eggs are wasted, every egg the queen lays being utilized.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Swarming.—"I have tried many plans to prevent swarming but without profitable results, and I now believe I can get the best results, not by preventing but by encouraging swarming, and then *properly* utilizing it to accomplish certain aims."—B. Taylor, in Review.

I am quite sure that this strikes the keynote of success with bees. As I have often said, I do not think it possible or desirable to develop a non-swarming race of bees. If it were possible, I am quite sure it would be at the expense of the honey-gathering qualities. The truth of the matter is, that I have never found swarming such a drawback as some claim it to be. A colony of bees which has been given plenty of room as fast as it is needed, until it has reached the point of swarming, is in the best possible condition to store a large quantity of honey, if the nectar is to be had in the flowers, and they are so manipulated that the strength of the colony is all thrown to the new swarm. It is a real pleasure to see such a colony work and to note how quickly they will fill the sections in two or three supers, and even more, if the honey-flow continues any length of time.

Value of Insects.—"I do not hesitate in this connection to refer to another of Prof. Ward's conclusions set forth in one of his interesting articles, namely, that most of the higher flowering plants would speedily perish were insect aid withdrawn, and that but for such aid in the past we should now be without most of our gorgeous flora, and that insects have actually paved the way for man's existence by the part they have played in the development of fruit and nut bearing plants."—Prof. Riley, in Insect Life.

This is well put, and clearly brings out the idea of man's dependence upon the things about him—animate as well as inanimate. As we study this inter-dependence of all things, the world comes to mean more to us, and the wisdom and goodness of the Designer stands out in bold relief at every step we take. The lower forms of life have paved the way for the higher types, and are constantly adding to their comfort and rendering their continued existence possible. So it comes to pass that science is daily opening up new fields of investigation, and giving the careful student of Nature enlarged ideas and broader views of the world in which he lives. Careful study soon leads one to see that this is not a world of chance, but one of law and order, and one in which the life of the smallest creature is not to be treated with contempt.

Position of Winter Stores.—"Say! hold on! Isn't is a fact that, but for the short warm spells during winter, which permit the bees to carry stores from any direction in the brood-nest to the center of the cluster, they would starve, the shape of the hive notwithstanding?"—J. H. Markley, in Gleanings.

Bees in old-fashioned box-hives do not depend upon warm days for their supply of honey, and I am quite sure that he who so prepares his bees for winter that they must depend upon the coming of warm spells for the food necessary to keep them alive, is very apt to find himself short a good many colonies in the spring. If bees are to winter in the best possible condition, they must have sealed honey, or something that will take the place of it, immediately above the cluster, and in direct contact with it as long as the cold weather lasts. The bees that are forced to carry honey during some "warm spell" into the combs on which they have clustered will not be found the "fittest to survive," in my opinion. I know that some advocate the theory that the cluster can move lengthwise of the comb and get honey in that way, but for some reason or other all of my bees that have been compelled to do this in order to reach their stores, have found the effort too much for them, and have perished in the attempt. Plenty of good food *above* the cluster is what takes them through, every time.

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George W. York, - - Editor.

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Editorial Budget.

Dr. Miller will be missed at the convention this week. His health and apiarian journalistic work wouldn't permit his leaving home. Too bad.

The Constitution of the North American Bee-Keepers' Association, as revised and adopted at the St. Joseph convention last year, will be found on page 578 of this number of the Bee Journal. It is very short and simple. Will it be revised again at Toronto? Wait and see.

Mr. Chas. Dadant is spending a few weeks at Sturgeon Bay, Wis., where, fortunately, he finds an annual escape from hay-fever, which so annoys him at his home in Hamilton, Ill. His series of profitable articles on "Extracted Honey" will be completed in these columns next week. Don't miss it.

A Glorious Rain blessed this part of the country Friday, Aug. 23. It was a regular soaker, and must have been of untold value to fall pastures and flowers. The prospects for fall honey are fine in many localities, so reports say. That will insure plenty of winter stores for the bees in such places.

The Five Bee-Keeping Women shown on the first page this week make a choice group. They are among the most prominent bee-sisters of to-day. I wish they all might be present at the Toronto convention this week, but probably none of them will be there. All excepting Mrs. Axtell were at the World's Fair bee-convention in 1893. I, for one, am proud of our representative bee-women—they are all exceptionally nice. I hope to show more of their number later on.

Crimson Clover, when in bloom, is pretty enough to afford a bed of it room in a flower-garden. So says Dr. Miller in a "straw" in Gleanings. The August 15th number of that paper had quite an interesting symposium on crimson clover. It seems to promise much as forage, for hay, plowing under, and last, but not least, as a honey-yielder. Reports from any who have had experience with it as a honey-plant, will be gladly received and published in the Bee Journal. The future prosperity of bee-keeping as a business may depend much upon the success bee-keepers have in influencing farmers everywhere to grow the various clovers—sweet, Alsike, alfalfa and the crimson. Let us find out all we can about these fine honey-yielders, and then endeavor to have them sown and grown as widely as possible.

Nebraska and Capt. G. W. Carnes.—I learn that Capt. G. W. Carnes, who is very familiar with his subject, is giving, in various places, a free lecture on "Nebraska and the Newer Northwest." He places his hearers in possession of an immense amount of interesting information. Go and hear him if he should lecture near you. In face of the present unusual prosperity of Nebraska, and the high price at which farm lands in Illinois and other eastern States are held, Capt. Carnes will confine himself to an interesting description of the great opportunities in Nebraska for the farmer of moderate means. In the past, Nebraska has been looked upon as solely a "corn" State, but the last few years have proved conclusively that it is one of the best States in the Union for varied crops; wheat, oats and other cereals, all descriptions of tame grasses, and in particular alfalfa—the great honey-yielder—have all been raised with the greatest success. Another industry, the production of sugar-beets, is increasing each year, and to-day Nebraska produces more sugar-beets to the acre than any other country in the world.

I Am Indebted to Editor Root for a very nice report, in Gleanings, of my recent one-day's visit to the "Home of the Honey-Bees." I can truly say that I have never looked upon Gleanings, or Bro. Root, as business rivals, but as friends who would rather help me and the American Bee Journal on to success than otherwise. Such friends are appreciated. There are but few matters upon which Bro. Root and I do not agree. In fact, they are so few as not to be worth noticing. We are both striving to publish good, clean bee-papers, and to do the right as nearly as we can see it. But neither of us claims to be perfect.

The Toronto Convention of the North American Bee-Keepers' Association will be in session when this number of the American Bee Journal reaches the majority of its readers. A full report of the proceedings will be published in these columns. I have engaged Bro. Hutchinson to furnish it, so there will not be the delay and finally no completed report as was the case last year. When Mr. Hutchinson agrees to do a thing, he does it. It is a real satisfaction to do business with a man that can be relied upon to do as he agrees.

Mark Tovell, an extensive and respected bee-keeper living at Guelph, Ont., died Sunday, Aug. 18. He was 75 years old. He was born in England, and came to Guelph in 1832, settling there with a large party from his native land. The sea voyage required eight weeks and three days. He took a great interest in bee-keeping the last few years of his life. The local newspaper, in chronicling his death, said: "In the death of Mr. Tovell, Guelph loses one of its early settlers, and his genial face, out-spoken sentiments, and kindly greetings will long be missed."

The First Comb Honey Shipment received by one of the largest dealers in Chicago, for this year, reached them on Aug. 23. They at once wrote me as follows:

We received to-day our first shipment of comb honey from Geo. G. Scott, Wadena, Iowa. The shipment consisted of 791 pounds, and we sold it on arrival at 16 cents per pound. The honey was put up in 12-section cases, 3 sections being shown through the glass. We like this package very much.

Wanted.—As the edition of the Bee Journal for Aug. 8, 1895, No. 32, is exhausted, I'd like to ask those who feel like sparing that number, to mail it to this office. If, when mailing it, you will write a postal card, so that I can know whom it is from, I will send yon a copy of "Honey as Food and Medicine" in exchange for it.

Honey and Beeswax in France.—From a Report on France, recently issued by the United States Department of Agriculture, "for the purpose of illustrating the possibilities attending a highly diversified system of agriculture in a country less than one-third larger than the State of California," I notice that the amount of Honey produced in 1893 was 6,432,607 pounds, valued at $2,049,481; and 4,427,157 pounds of beeswax, valued at $853,107. It also shows that in 1892, 580 colonies of bees were imported into France; in 1893, 492 colonies, and in 1894, 659 colonies. It does not say where the bees came from.

The Alsike Clover Leaflet consists of 2 pages, with illustrations, showing the value of Alsike clover, and telling how to grow it. This Leaflet is just the thing to hand to every farmer in your neighborhood. Send to the Bee Journal office for a quantity of them, and see that they are distributed where they will do the most good. Prices, postpaid, are as follows: 50 for 25 cents; 100 for 40 cents; or 200 for 70 cents.

The Book "Bees and Honey," which we are using as a premium for new subscribers, we are entirely out of just now, but will have a new edition about Sept. 15, when all orders will be filled promptly. Send on the new subscriptions just the same—the premium book will then be mailed afterward, as stated above.

Among the Bee-Papers

Gleaned by Dr. Miller.

DIVISIBLE BROOD-CHAMBERS.

Some are saying that bees do not rear brood to so great an extent when a divisible brood-chamber is used, and that the queen is likely to neglect one section. I have used such hives in large numbers now for years, and have never seen anything of the kind. There is usually more brood in the lower section, just as there is more brood in the lower part of an ordinary frame of a single-story hive, but at the height of the breeding season this difference is very slight.—Review editorial.

VALUE OF BROOD-FOUNDATION.

Bees, if left to themselves, will have at least the two outside combs of drone. I have not tested it, but would say that such a colony would gather about a fifth less honey and consume about one-tenth more, which would mean over one-fourth less surplus. We can easily see the loss is considerable; not only have we two frames less in which to rear worker-bees, but we have two frames more, that rear consumers. It is my belief that a colony on comb built of foundation, or which have all, or nearly, all-worker comb, are worth at least one dollar more each year than one which is allowed to build their own comb. Many, however, from shortsightedness, would object to giving it if they were buying. If such a colony is kept for a number of years we can understand that the loss or gain is considerable.—Canadian Bee Journal.

A VISIT FROM THE EDITOR OF THE AMERICAN BEE JOURNAL.

We all of us, big and little Roots, have had a most enjoyable visit from Mr. George W. York. From the very first a pleasant, and I might say, a sort of kinship feeling, sprang up between us. I was attracted by his out-and-out spokenness, and gentle and Christianlike bearing; and the more I have come to know him, the more I esteem him—not as a rival, but as a co-worker. (Mutual-admiration society? Well, call it what you like, if I admire my friends and am not afraid to say so.)—Gleanings.

HONEY IN THE BROOD-CHAMBER.

I have been a careful observer for 25 years, and find that when bees are at work best in sections there will be very little honey in the body of the hive, if the hive has the right size of brood-chamber, during the early or white honey harvest, which is the one that the bee-keeper is the most anxious about. But should some honey accumulate in the brood-combs, it would be a doubtful expedient to use the extractor on the combs below, and I have reason to know that if any one expects to secure a large yield of comb honey, and use the extractor on the brood-combs at the same time, he will not realize his expectations. After the bees get thoroughly at work in the sections let the brood-combs alone, and you need have no fears about the queen being crowded. If honey accumulates in the combs before the bees are fairly started in the sections, have no fears, for as soon as they go to work above they will carry it all up into the sections and make abundant room for the queen.—G. M. DOOLITTLE, in American Bee-Keeper.

ALSIKE CLOVER AND BASSWOOD.

The following from the discussions of the Ontario Bee-Keepers' Association is clipped from the Canadian Bee Journal:

"Mr. Pringle—You need not depend on the white clover for honey; but the Alsike I hardly ever knew to fail. I have been sowing it for 25 years—every year more or less—and I never knew it to fail to yield nectar. We ought to sow more Alsike, and I believe, too, in planting basswood. I have planted some hundreds myself, and they are nearly ready to bloom. As for the second-growths, we need not depend much on that. Most of the ground so occupied is cleared and put under cultivation.

"Mr. R. E. Jones related a circumstance to show that in his own case the bees had passed right over a crop of Alsike and took none of it. The bees came home with honey, but it was not from the Alsike.

"Mr. Gemmill could bear out the statement of Mr. Jones. Much of the honey that was supposed to be Alsike was in reality wild mustard."

WIRE BOTTOM-BARS IN BROOD-FRAMES.

We have recently received from Mr. S. M. Keeler, of Chenango Bridge, N. Y., a sample brood-frame having the bottom-bar made of wire. Mr. Keeler writes that for a long time he has studied the question how to get bees to build combs down to the bottoms of the frames, and now believes he has solved it. The wire used is about 3-32 of an inch in diameter; the ends are turned up and driven into the ends of the end-bars. By using these wire bottom-bars there is left no hiding-place between the comb and bottom-bar for the queen; and the combs being built right down to and fastened to the wire, will not sag. The combs of brood and honey can be handled very much better and safer.—American Bee-Keeper.

EFFECT OF BAD WINTERING ON QUEENS.

C. W. Post says in Canadian Bee Journal: "If a colony winters badly, say has dysentry, I find it influences the working qualities of the queen. The colony pulls up slowly and does not appear to exceed a certain strength. I believe from what I have observed, what destroys the vitality and strength of the working bees, impairs the usefulness of the queen. It would be better to destroy that queen and replace her with another, a young queen, if possible. Such a queen will pull up a colony a long way ahead of the old. Many do not look upon the matter in this light, I know, but my statement is based on close observation."

WOOD-BASE FOUNDATION.

We notice some discussion going on about wood-base foundation. If we mistake not very much, Mr. D. A. Jones used that 15 or more years ago, and gave it up. We can tell bee-keepers that it has been tried since with the following results: In several instances, while the bees were working and busy rearing brood, it was all right, and everything went lovely; but when out of wholesome employment the bees became very human and got into mischief; they then set to work to eat away and remove the wood. It is not likely that we will get anything to take the place of beeswax in the building of comb in the hive. Wood in the base appears to be too base a material for the bees.—Canadian Bee Journal.

USELESS CONSUMERS.

S. E Miller says in the Progressive Bee-Keeper:

"Nowadays there is a great deal being said about useless consumers (not tramps that roam over the country, and go from house to house, asking for a bite to eat, but worker-bees produced from eggs laid inside of about 40 days before the honey harvest opens). This looks well on paper and sounds well in theory, but will it hold good in actual practice? Let us say 21 days from the time the egg is laid until it hatches out a perfect bee; and add 16 days until it arrives at the age

when it is ready to go to the field to gather nectar—the age at which those who claim to know tell us a bee becomes a field-worker. This gives us 37 days. Now if we could stop all egg-laying 37 days before the main honey harvest commences, without throwing the colony out of a normal condition, would we gain anything? Let us draw a comparison:

"Suppose you have a number of men working for you—six in the harvest field, and one about the house to do up chores, but need one more in the field. Now if you hire a boy to do up the chores, and send the man to the field, is it not just the same as if you had hired a man to put in the harvest field? So it looks to me as though these so-called useless consumers might not be so useless after all. The bee that takes the place of a nurse-bee or comb-builder, and allows that nurse-bee to become a field-worker, it seems to me is just about as useful as the field-worker. What say you?

"'Useless consumers' is a term that seems to take well with many writers on apiculture, and some have got to handling it in a very reckless manner. I would caution them to be very careful, lest it might be loaded and go off, and injure the one that is handling it."

DARK ITALIAN QUEENS.

Among imported Italian queens some are very dark and produce finely-colored workers. W. J. M. says in Australian Bee-Bulletin:

"I reared some queens from an imported tested queen, and one queen I reared was quite black, indeed so black that I thought here was a game of stealing eggs, and she was marked for removal. However, having gone away for a short holiday I left her, and when I came back I found her so prolific that I built up the nucleus to a full colony by the usual methods. Four months afterwards, having received another imported queen, I went to remove her black majesty. On opening the hive I found the bees unusually quiet, and on further examination I found the hive full of pure Italians, although the queen was to all appearances a common black one. Now for this reason alone, we should be careful when discarding dark-colored queens till they have been given a fair trial."

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

Purity of Italian Bees—Honey-Plants.

1. Will ordinary 3-banded bees hold up to their markings when kept at a safe distance from other bees to prevent crossing? Now, if they will hold up to 3 bands, it is contrary to my experience, and I have been experimenting with Italian bees four or five years. I find that bees showing 3 bands, and those that show 3 bands when filled with honey, make very dark-colored queens and drones; the drones are commonly very dark, some showing no yellow marks at all. My experience with such bees is, you have to select the very best marked queens and drones to breed from, or you will soon have plenty of black bees in your apiary. Now, is it impurity, degeneration, or what?

I have a queen that I bought for an imported Italian; her bees show 3 yellow bands very clearly at all times, and under the bottom of the abdomen they are yellow to the tip; she produces uniform drones, and they are yellow except a little dark on the end of the abdomen; and her queens are uniformly and highly marked. It is no trouble to get these bees to hold up to 3 bands, and they are doing just as good work as the leather-colored bees. The bees that will hold up to their markings and do good work are the bees for me.

2. Does cotton-bloom give any honey?

3. My bees work rapidly on sumac. Is it a good honey-plant?

4. Does golden-rod give much honey? My bees don't seem to notice it much, but they come down on aster all right, and get a lot of honey from it, too.

A. P. L., Batesburg, S. C.

ANSWERS.—1. The term "*safe distance*" in my friend's interrogatory is very indefinite. One person might think a fourth of a mile a safe distance to prevent one variety of the honey-bee from crossing with another; while another bee-keeper might have in his mind some other distance. I have known black queens to mate with Italian drones distant four miles. I was the first person in this portion of Georgia to introduce the Italian bee, and I availed myself of my advantage to test this question. If you wish to keep your bees pure you should have all Italian drones in a radius of four miles. This you cannot do, for there may be many colonies of black bees ensconced in trees within the range of your bees. Besides, if you want to keep up the purity of your bees, you must select your breeders—both queens and drones. The best marked queens are not always the best breeders. There is not one queen in 50 that will invariably duplicate herself in markings in her queen progeny. A queen that will do it is worth money.

The Italian bee is no fixed type of bee. It is only a variety, and as such it is liable in breeding to revert back to the original—to sport. Recently some one in the bee-papers has been giving rules to test the purity of Italians by *invariable* yellowness, etc. Such tests do not amount to a bagatelle. I have imported hundreds of queens direct from some of the best Italian breeders, and I found the queens to vary very much in markings; the drones from quite dark to mottled with bright yellow; the queen progeny from nearly black to bright yellow. Because of this variation is no signs of impurity, if the fact of their coming from Italy will make them so. When that bee-keeper who has mapped out in his fancy his Italian queen, worker, or drone with markings of invariable fixedness as the only test of purity, he will be as much disappointed as when a redheaded, or blackheaded, or whiteheaded, or cockeyed baby pops up in his family. He should constantly stick to his uniform markings.

From what I have said I think the correspondent will have no trouble to formulate answers to his questions concerning preserving the purity of Italian bees.

2. In some seasons, owing to atmospheric or soil conditions not understood, it yields honey in large quantities.

3. Sumac is a good honey-plant, but the honey is very dark.

4. Golden-rod, in my section, is very unreliable for the secretion of honey.

Equalizing the Strength of Colonies.

I have several strong colonies and one weak one, all lately transferred to 8-frame hives from box-hives. I wish to build up the weak colony as quickly as possible. May I, after smoking a strong colony, place the weak one on top of it with a honey-board between them, with the hope that the colonies will become more equal in strength? If not, what is the best course to pursue? If I feed the weak colony, the others persist in robbing it, although all the usual methods have been tried to prevent it. E. B. T.

Lynn, N. C., Aug. 15.

ANSWER.—I don't think the plan of placing the weak colony over a strong one with a honey-board between will accomplish the object you desire. You say when you feed this weak colony the others persist in robbing it. This has to be stopped. Give it a frame of crawling-out brood from one of your strong colonies; contract the entrance to the hive so that only one bee can pass at a time. Set up in front of the entrance a lot of weeds, brush or boards to ward off the robbers. Place the feed *inside* the hive over the brood-frames, where the bees can easily get at it. Do this near dark; and do not give any more feed than they can take up during the night. When you open the hive do it at times when few bees are stirring, and then use a cloth to throw over the exposed frames. In a week give it another frame of crawling-out brood.

If you find the hive is still robbed with all this care and attention, close it up with wire-cloth and carry it into a close, dark room, and allow it to remain 48 hours (meantime, feed), and then place it on a new stand with all the precautions previously taken. If this will not succeed, unite it with another colony.

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—OR—

MANUAL OF THE APIARY.

—BY—

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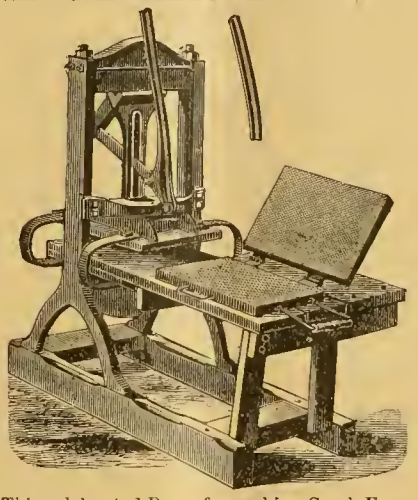

This celebrated Press for making Comb Foundation is acknowledged to make it most acceptable to the bees. I have one which has been used, but is in perfect order. The outfit consists of—

1 Given Press with Lever, 11x16½ inches.
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4 Dipping-Boards, 10x12.
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☞ Be sure to mention the American Bee Journal when you write.

General Items.

Best Basswood Flow in Years.

Bees in this locality have done well, considering the season being so cold in May and June, and then the drouth that followed. The flow from basswood was the best for many years. I got some of the finest comb honey I ever saw.

Bees are working on red clover now more than usual, the bloom being short. I get 20 cents per pound for all the honey my 30 colonies can produce. Some of my neighbors still stick to the old log gum, and consequently cannot sell their honey for much, but they don't get much to be in my way.

Carson, Ind., Aug. 17. WM. G. CORY.

Single or Double Walled Hives.

On pages 488 and 489 is a request by C. E. Mead, to report the wintering of bees in double and single walled hives. I started in the fall of 1894 with 10 colonies, six of which were in the Hilton chaff hive, and four in the Dovetailed hive, with winter-cases. Two of the colonies in the Hilton hive died in February, with 20 and 25 pounds of honey. The weather had been extremely cold for nearly two weeks, the mercury ranging from zero to 10 degrees below, but I do not think it was any fault of the hive. S. A. RAYMOND.

Bonney, Mich.

"The Good Time" Came at Last.

Our honey-flow, this year, is better than ever before. White clover commenced blooming in May, and is still bloomiug—in fact, it has just taken a new start again. Basswood was good. Alsike yielded finely, and this is the first year I ever saw my bees working on red clover. They do better on red clover this season than on white. My best colony gave me 135 pounds of honey—90 of comb and 45 extracted—a prime swarm of June 1 filled 48 sections, and others did equally well. So I think this is "the good time" that I was looking for so long. Swarming was quite extensive this season; some bees doubled, and some trebled. F. N. BLANK.

Prairie Home, Mo., Aug. 12.

Those Wicked Italians!

I have forgotten whether it was Dr. C. C. Miller or some other equally good-looking but enthusiastic bee-man who misled me into the belief that the Italians were such docile, well-behaved, innocent insects, and the German variety the very opposite. I say I cast no positive reflection, but I have been fully convinced, from fresh and enlarged experience, that the very opposite of such a statement is true.

My story is brief, but sharply defined. Bro. York has a colony of Italians—a big, industrious one, too—right next to mine, which are handsome, shining Germans. Well, on request of the enterprising editor of the American Bee Journal, I proceeded to assist him in fooling with his five-banded, golden, diamond-pointed Italians. I wield-

ed the smoker, and he opened up for business. The next instant came a grand and sudden rush. Zipp—buzz—biff! Gee-willikens! The air was thick with the golden varmints. They sang: I danced. I wonder if hornets are more active or forcible! The end came, and quickly. I retreated hastily, but in good order. The next hours, or minutes, were mainly occupied in scraping beestings off my lips and chin. Then I enlarged; I looked like a boy with a bad case of mumps.

My confidence in Italians is shattered.

EMM DEE.

[Emm Dee, for once in his life, had a good deal of "chin" to "wipe off," and his lip—well, I haven't yet gotten over laughing. He certainly had "too much lip" for either comfort or genteel appearance.—EDITOR.]

Honey from Sumac.

I see on page 508 it is said that "sumac is a good honey-plant, but the honey is dark." Mine is nearly as white as clover honey.

B. F. ONDERDONK.

Mountain View, N. J.

A Bee-Keepers' Paradise.

I began this season with 13 colonies. If I am to judge by the reports from the various sections of the United States, this must be a bee-keepers' paradise, as we have a delightful climate here, and an almost incessant honey-flow. In spring we have the fruit, which is considerable, and the entire country is covered with wild flowers. Then we have innumerable acres of alfalfa, which lasts here until frost; but greatest of all is the cleome, or bee-weed, as it is called here, which begins blooming about June 1, and continues until frost. It produces so much honey that bees usually quit everything else when it comes in bloom.

Every one here keeps a few bees, but there is scarcely any one who makes a business of it.

I would like some reader of the "Old Reliable" to tell me through its columns what buckwheat is worth as a honey-plant in a country where no dew falls.

JNO. PINGAN.

Aztec, New Mex., Aug. 5.

Bees Did Well in Maine.

Bees have done well here this season. My bees last year gathered quite a lot of honey-dew, therefore I lost heavily last winter, losing 24 out of 84 colonies in the cellar, and 10 more after they were put out, from spring dwindling.

I have kept bees nearly 30 years, and they have been a great help to us. Although we are in nearly 47 degrees north latitude, I have never had to feed a dollar's worth of sugar to winter, and never saw a year yet that I did not get some surplus. Once I got 105 pounds of comb honey from a colony hived July 25, in a hive without any combs or foundation in the brood apartment, and only small starters of foundation in the sections. I also secured one year 1½ tons of mostly comb honey from 17 colonies, spring count. Both of the above results were obtained when the woods were full of fireweed, *Epilobium Angustifolium*, and wild raspberry. Of late years we have not had so many of the above-named plants, and the bees have not done as well.

I have tried several kinds of hives, and none suits me so well as the Simplicity, with upper stories containing 7 wide frames with 28 one-pound sections, and the top and bottom bars of the frames each 1⅝ inches wide, the same as the sections; covered with a piece of oilcloth as large as the outside of the hive; then the bees cannot gnaw the edges of the cloth and get up under the cover.

As I have bees enough now, the last few years I have practiced hiving from 2 to 4 swarms in a hive, and then pile on the sections. Last year, from 3 swarms put into one hive, we took off 80 completed one-pound sections of honey at the end of 8 days. This year we have had only 60 swarms, and have put them into about 25 hives.

E. TARR.

Mapleton, Maine, Aug. 13.

Bees and Cotton-Bloom.

On page 507 it is asked whether bees work on cotton-bloom. I must differ from Dr. Brown's answer, for I have never seen (nor has any one whom I have asked) a honey-bee on cotton-bloom. I live in the cotton-belt, and have been engaged in bee-culture for 15 or 18 years.

J. J. KEITH.

Lonisville, Ky.

Overstocking in Colorado.

As the honey harvest is over in Colorado for this year, would Mr. Thompson, of Arvada, Colo., please give his average surplus per colony, so that we may come to a conclusion whether his locality is not overstocked with bees. From what I have heard, it seems rather overstocked in other parts of the State.

At the last session of the Colorado State Bee-Keepers' Association, from the report of the Arapahoe county bee-inspector, on foul brood, we learned that 25 per cent. of the bees inspected were diseased; so there are other causes than overstocking, that ought to warn others from coming into the already overstocked field. Perhaps, had there been less bees, there would be very little foul brood among them. The bees would have had the field to look for food instead of in their neighbor's hive.

The American Bee Journal is always welcome.

S. M. CARLZEN.

Montclair, Colo., Aug. 17.

Raising Bees and Boys.

I attended a formal dinner at the home of a friend some time since, at which a number of "toasts" were announced, and responded to by those present. The enclosed is the response of a bee-keeper to the toast, "Bees and Boys: Points on Raising Both."

W. C. KEMP.

Orleans, Ind.

[The following is the "response" Mr. Kemp refers to in the foregoing:—EDITOR.]

BEES AND BOYS: POINTS ON RAISING BOTH.

One important point in the raising and management of bees is to own a colony and study closely their habits and peculiar characteristics. One must be neighborly

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I am rearing Queens from a strain of yellow-banded Bees that have never been known to cast a swarm! Can any other bee-keeper make such a claim? These Queens are a beautiful orange-color, very prolific, and produce handsome three-banded workers. The Bees are great honey-gatherers, very gentle, enter the sections readily, cap their honey snow-white, and winter on the summer-stands in perfect condition in any climate; and in most cases can be handled without smoke or protection of any kind. I can fill an order by return mail for 200 Queens. Safe arrival and perfect condition guaranteed; when otherwise, another Queen will be sent by return mail.

Prices—One Queen, $1.00; three Queens, $2.75; six Queens, $5.50; twelve Queens, $9. All my Queens are mailed in self-introducing cages, and directions for safe introduction with each Queen.

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UNION, Maine, Aug. 17, 1895.
MR. ALLEY:—I inclose $1 for a Queen like that one sent in 1894. She was a good one.
W. CARROLL.

OLYMPIA, Wash., Aug. 16, 1895.
MR. ALLEY:—The Queen you sent me last season is the best one in my apiary. Find $1 for another. H. GALLOWAY.

WOODBINE, Iowa, Aug., 1895.
MR. ALLEY:—I bought a Queen of you last year. The bees are very handsome, good workers, and have shown no signs of swarming. Send me one like her. B. L. COPELAND.

☞ Don't fail to order one of these Queens by return mail. You can test them before July, 1896. This is the best time in the year to introduce Queens. Address,

HENRY ALLEY,
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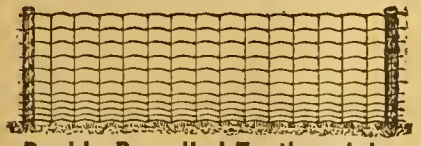

Double-Barrelled Testimonials.

When our railway salesman went to Europe to attend the Inter-National Railway Congress, he carried a score of splendid testimonials from officials of the leading lines in America. We are not allowed to publish them, but nearly all mentioned among other reasons why they used the Page, that "it suited the adjoining farmers." Thus we are able to "stay on both sides of the fence," some thing politicians can't do.

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Globe Bee Veil

By Mail for One Dollar.

Five cross-bars are rivited in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through.

It is easily put together and folds compactly in a case, 1x6x7 inches, the whole weighing but 5 ounces. It can be worn over an ordinary hat; fits any head; does not obstruct the vision, and can be worn in bed without discomfort. It is a boon to any one whom flies bother, mosquitos bite, or bees sting.

Nets, 50 cts. each.

☞ This Veil we club with the Bee Journal for one year—both for $1.75; or give free as a Premium for sending us 3 New Subscribers to the Bee Journal at $1.00 each.

and friendly with them; talk to them, handle them, and if one should resent your caress by using its point of defense, you should grin and bear it, and not be guilty of any rash act, but in your mildest and most persuasive manner, say to it that such familiarity tends to breed contempt, and kindly request it not to repeat the act. It is certain to obey you, for it can do that same unkind act but once, and if you have but one bee, you will have no future cause of complaint; but bear in mind, that there are at least 20,000 more to deal with, and your patience and perseverance will be tried to the utmost, for they will all meet you with an argument that is convincing, and one that sticketh closer than anybody's brother.

Another point is, that they are never idle. You know the couplet,

> "How doth the little busy bee
> Improve each shining hour," etc.

They do business through the back door as well as the front door, on Sunday as well as week-days. Their rule is to pay as they go, and sometimes they pay without going. This habit of industry is to be emulated by their keeper, that he may instill it into his boys.

As the raising of boys, as well as bees, is a question to be discussed in this response, I will pass to that part of my subject. As there are not so many *points* to be handled here, your time will not be heavily taxed. It is very necessary that a colony of bees should be a part of the belongings of the man who owns a boy—not only to supply him with a delicious food, but to teach him habits of industry and lessons of economy. If you do not want the worry, trouble and anxiety of long years in raising that boy, you can do it much quicker by calling your bees to your assistance. Place one of your most trusty and reliable pets on the seat of a chair; cover it with a thin gauze to hold it; direct your boy to sit down on the thin gauze. If you have done your duty as a parent should in training that boy to habits of obedience, he will obey at once, and then you need give yourself no further concern, for that boy will *raise* himself without assistance.

Honey Almost a Failure.

I commenced last spring with 4 colonies, having wintered without any loss. I increased them to 10 colonies. After swarming the honey season closed about the last of June. Sourwood and basswood were almost a failure, as it has been raining nearly every day since July 1. If it continues raining, the bees have to be fed, or starve, as the rain washes all the nectar out of the flowers. But we hope to have a fall flow, which will save the bees from loss. There are a good many bees kept in the old-style box-hive, and such bee-keepers would not take a bee-paper, as they "know it all," but make but little money out of their bees. But we hope that they will soon learn bee-keeping as it is now practiced by the best bee-keepers. JOE STEPHENSON.

Bunch, Tenn., Aug. 17.

False Pennyroyal—Fall Honey.

I want to know what is the weed I herewith send you. I found it in a neighbor's fence-corners five or six weeks ago. The bees work on it all day. There is only one bunch of it, yet the bees seem to go as crazy over it as they would over a frame of honey. The plant seems in full vigor, with a fair promise of yielding honey for some time yet.

My bees have worked on clover all through June, July and August to date, getting just honey enough to stimulate brood-rearing and swarming. I have had a number of swarms since July 20, and they are still at it.

I think the prospect is good for fall honey. We have had lots of rain since May, which is causing a rank growth of weeds.

W. E. BURNETT.

Harrisburg, Ill., Aug. 12.

[The plant is *Pycnanthemum linifolia*, sometimes called "false pennyroyal." It has been noted for some time as a good honey-plant. It belongs to the mint family, and is one of our native prairie plants.—T. J. BURRILL, University of Illinois.]

Full of Faith for Next Year.

The honey crop is light here again. I have run for increase largely this season, and now have as fine a lot of colonies as I ever owned, the hives filled with brood and honey. I am full of faith for next year, and am entirely happy, even if my answer to Query 986 (on page 579) does suggest the blues. No, sir; I could not have the blues if I should try. I will, like the bees, divide the stores, and be happy, while there are any; then be content to suffer with the rest. B. TAYLOR.

Forestville, Minn., Aug. 20.

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Cuts clean on all sides—does not crush. The most humane, rapid and durable knife made, fully warranted. Highest World's Fair Award. Descriptive Circulars Free.

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Address. **C. E. MEAD,**
87 Artesian Ave., Station D, CHICAGO, ILL.
Mention the American Bee Journal.

Constitution of the North American.

ARTICLE I.—NAME.

This organization shall be known as "The North American Bee-Keepers' Association," and shall include in its territory all of the United States and Canada.

ARTICLE II.—OBJECT.

Its object shall be to promote the general interests of the pursuit of bee-culture throughout North America.

ARTICLE III.—MEMBERSHIP.

1. Any person interested in apiculture may become a Life Member upon the payment to the Secretary of the sum of ten dollars.

2. Any person interested in apiculture may become an Annual Member upon the payment to the Secretary of one dollar. Ladies interested in apiculture may become members free.

3. No member shall be entitled to the floor for more than five minutes in any discussion, without the consent of the Association, nor a second time, unless by the consent of the President, or a majority of the members present.

4. Any person may become an Honorary Member by receiving a majority vote at any regular meeting, after having been approved by the Executive Committee.

ARTICLE IV.—OFFICERS.

1. The officers of this Association shall consist of a President, a Vice-President, a Secretary and a Treasurer, who shall be elected by a majority ballot at each annual meeting, for the calendar year following; and their duties shall be the same as usually devolve upon such officers. They shall constitute the Executive Committee.

2. The Executive Committee of this Association shall cause the Constitution to be printed in appropriate form, and every person joining the Association shall be entitled to a copy of the same.

3. The Executive Committee shall select subjects for discussion, and the same shall be published with the call for the next annual meeting. It shall also provide badges for all members.

4. The Executive Committee shall also provide a place of meeting for the annual convention, and see that all necessary arrangements are made to carry out the demands of this Constitution.

5. The Secretary shall be paid a salary of $25.00 a year, at each annual meeting.

6. An Auditing Committee of three shall be appointed by the President, on convening of each annual session, whose duty it shall be to audit any or all accounts so ordered by the Association.

ARTICLE V.—MEETINGS.

The annual meeting of this Association shall be held at such place as shall be agreed upon at the previous annual meeting. Ten members shall constitute a quorum for the transaction of business, but a less number may engage in discussion, and adjourn until some future day.

ARTICLE VI.—VACANCIES IN OFFICE.

Vacancies in office, by death, resignation, or otherwise, shall be filled by the Executive Committee, until the next annual meeting.

ARTICLE VII.—DEFENSE COMMITTEE.

A Defense Committee of seven shall be appointed for the purpose of considering the applications of members for defense from unjust lawsuits by those who are prejudiced against the pursuit. This committee shall be the officers annually elected by the National Bee-Keepers' Union.

ARTICLE VIII.—AMENDMENTS.

This Constitution may be amended at any annual meeting by a two-thirds vote of all the members present.

Convention Notices.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association in Fort Scott, Kans., on Sept. 19, 1895. All are cordially invited to come and have a good time. There will be a full program.
Bronson, Kans. J. C. BALCH, Sec.

MINNESOTA.—The next meeting of the Southern Minnesota Bee-Keepers' Association will be held at Winona, Oct. 15 and 16, 1895. All members are urgently requested to attend. All bee-keepers and others interested are cordially invited. E. C. CORNWELL, Sec.
Winona, Minn.

WISCONSIN.—The Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting at Platteville, Wis., Oct. 8 and 9, 1895. "Come, every one." Don't get discouraged if we haven't got a crop of honey. We will have a good time at Platteville, just the same. Bring your wives and daughters with you. Many interesting subjects will be discussed. M. M. RICE, Sec.
Boscobel, Wis.

North American Bee-Keepers' Association

OFFICERS FOR 1895.

PRES.—R. F. Holtermann.....Brantford, Ont.
VICE-PRES.—L. D. Stilson.....York, Nebr.
SECRETARY.—W. Z. Hutchinson...Flint, Mich.
TREASURER.—J. T. Calvert.....Medina, Ohio.

National Bee-Keepers' Union.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
GEN'L MANAGER—T. G. Newman, Chicago, Ill.
147 South Western Avenue.

Select Tested Italian Queens

Friends, I will have 200 Select Tested Queens for sale Sept. 1, at $1.00 each or $10.00 per dozen. Untested, 50 cents each, or $5.00 per dozen. Tested Queens 75 cents each, or $6.00 per dozen, either Golden Italians or Imported stock at same price. Safe arrival and satisfaction guaranteed. Address.

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Quality always the best. Price always lowest.

Working Wax into Foundation by the lb. **a Specialty.** I can make it an object for you in any quantity, but offer special inducements on straight 25 or 50 lb. lots. Or for making large lot of Wax into Foundation. I am furnishing large Dealers, and can also please you. **Beeswax taken at all times.** Write for Samples and Prices, to

GUS DITTMER, AUGUSTA, WIS.
Reference—Augusta Bank. 16Atf
WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

Woodcliff Queens.

I will send a Guaranteed 5-Banded Yellow Queen, bred from a Breeder selected from 1000 Queens (some producing over 400 lbs. of honey to the colony); or a 3-Banded Italian Leather-Colored Queen direct from a Breeder imported from Italy. Oct. '94—**at 75c.,** and a special low price for a quantity.

My secret is to sell an extra-large amount, which enables me to sell at low prices. Will run this spring 350 Nuclei—have 1 home and 4 out apiaries. No Queens superior to my Strain.

☞ Send for Descriptive Catalogue and Testimonials, to

WM. A. SELSER, WYNCOTE, PA.

KANSAS BEE-KEEPERS! —Take Notice—

Before placing your order for Supplies write for my VERY LOW PRICES on

D. T. HIVES, SECTIONS, SMOKERS SHIPPING-CASES AND COMB FOUNDATION.

Catalogue Free.
18Etf **A. W. SWAN, Centralia, Kan.**
Mention the American Bee Journal

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Aug. 25.—We are having considerable inquiry for comb honey. We have as yet received but a few small consignments. We quote: Fancy white, 15c.; No. 1 white, 14c. Extracted, 5@7c.
Beeswax, 25@27c. J. A. L.

KANSAS CITY, MO., Aug. 20.—The receipts of new comb and extracted honey is fair, the demand not large, but will increase with cooler weather. We quote: No. 1 white comb, 1-lbs., 14@15c.; No. 2, 12@13c.; No. 1 amber, 11@12c.; No. 2, 10@11c. Extracted, white, 6@6½c.; amber, 5½@6c.; Southern, 4½@5c.
Beeswax, 22@25c. C. C. C. & Co.

PHILADELPHIA, PA., Aug. 19.—New crop of comb honey is coming in more freely and generally in good condition. Demand is now beginning to spring up. New extracted is arriving in a small way. We quote: Fancy comb, 14@15c.; good, 13c.; fair, 9@11c. Extracted, 4½@5½c. It is hard to get our market to rally after the blow it received in the spring on discovering such a large amount of beeswax adulterated. We quote pure wax, 22@25c. W. A. S.

ALBANY, N. Y., Aug. 19.—The honey market is now beginning, and I think this the best time to sell, especially white grades of comb honey. Receipts so far are light. We quote: White comb, 14@16c.; mixed, 12@14c. Extracted, white, 7@7½c.; mixed, 6@6½c.; buckwheat and dark, 5½@6c.
H. R. W.

CHICAGO, ILL., Aug. 7.—Some of the new crop of comb honey has come on the market, and we have sold same at 15c. There is also sale for the darker grades at 8@12c. Extracted, 5@7c., according to quality, flavor and color. Beeswax, 25@27c. R. A. B. & Co.

BUFFALO, N. Y., Aug. 23.—Receipts of honey are light as yet. Comb and fancy stock would sell at 14@15c.; choice, 12@13c.; buckwheat is moving exceedingly slow and is hard to place. The indications are that early shipments will realize the best results.
Beeswax, 25@30c. B. & Co.

CINCINNATI, O., Aug. 7.—Demand is lively for new extracted and comb honey, all old honey being closed out. Arrivals are fair but insufficient for the demand. Comb honey brings 14@15c. for choice white. Extracted, 4@7c.
Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. M. & S.

CHICAGO, ILL., Aug. 23.—Fancy white comb honey (1-lbs.) in nice, clean packages sells at 16c.; other grades of white honey, 14@15c.; amber, 13@14c. We are having a good trade in extracted honey, selling light amber and white at 6@7c.; dark, 5@5½c. depending on quality and style of package. Early shipments to market advised so as to permit of sale before cold weather sets in.
Beeswax, 28c. S. T. F. & Co.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

J. A. LAMON, 43 South Water St.
S. T. FISH & Co., 189 S. Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 120 & 122 West Broadway.
CHAS. ISRAEL & BROS., 486 Canal St.
I. J. STRINGHAM, 105 Park Place.
FRANCIS H. LEGGETT & Co., 128 Franklin St.

Kansas City, Mo.

C. C. CLEMONS & Co., 423 Walnut St.

Buffalo, N. Y.

BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

Philadelphia, Pa.

WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Expert Opinions of the Bee-Literature of To-Day.

Query 986.—1. What new feature would you like to see added to our present bee-literature, and which you think would improve it? 2. What do you think could be eliminated therefrom, and not impair its value?—Mo.

Prof. A. J. Cook—1 and 2. I think it superior already.

E. France—1 and 2. I guess I will leave this matter to the editor.

Chas. Dadant & Son—2. Eliminate religion, politics, and personal disputes.

P. H. Elwood—1 and 2. More of new methods and implements, and less of old.

Rev. M. Mahin—1 and 2. I am well satisfied with our bee-literature as it is, and have no suggestions to offer.

Rev. E. T. Abbott—1. Some of the fellows who write stop, and some who write very little write more. 2. Ignorance.

Mrs. L. Harrison—1. I do not see but that the ground is thoroughly worked over now. 2. Let those who see any "weeds" pull them up.

C. H. Dibbern—1. I don't know. 2. The present literature seems to be all that can be desired, and I don't know where I would eliminate anything.

Mrs. J. N. Heater—1 and 2. You have found *one* person, at least, who does not know better how to manage a paper than the editors do. Our bee-literature suits me as it comes to us.

J. A. Green—1. I do not know of any "new" feature that I would like to see added. 2. I would like to see everything eliminated that is visionary, impractical and uninteresting.

Dr. C. C. Miller—1. The appointment of a censor to make corrections, such as striking "and" out of this question. 2. Eliminate all unkind things that are said merely for the sake of being unkind.

Eugene Secor—1 and 2. It seems to me that the apicultural field is pretty well covered by the bee-journals. I am not one of the fellows who thinks he could publish a better journal than is made to-day.

W. G. Larrabee—1. Perhaps honest quotations from some of the commission men would be beneficial. 2. That is hard telling. I would not want to spare any of the departments from any of the papers.

R. L. Taylor—1 and 2. I who am without experience either as editor or publisher would not venture to criticise those who have had long experience. Our editors are pretty good judges of what their readers want.

B. Taylor—1. I think to add the fact that bee-keepers must have better honey crops soon or go to the poor-house would be an improvement. 2. The statement that the honey-producers are generally having a good time.

Allen Pringle — 1 and 2. When you say "feature," I suppose you mean *face*-features. Well, I would take away some of the *cheek* from them, and add to another feature which spreads itself out (or ought to spread itself out) above the cheeks and eyes! Then there is another *feature* (bump) on the top of the head, just north of the crown, which gives rise to self-conceit, which could be "eliminated therefrom, and not impair its value." Of course, I assume that by "bee-literature" the querist means the bee-journals on this side the line as well as that.

W. R. Graham—1. I would like to see a representative man, or *writer*, from each State, Territory and Province—a person that would give the facts of the State and the locality. 2. I liked the original size of the Bee Journal better than the present.

G. W. Demaree—1. O I don't know! I am fairly well pleased with our present bee-literature. 2. Well, a good deal of jaw about "8-frame hives," and about too much "bands" on bees, etc., could be dropped for awhile, without impairing our bee-literature.

Dr. J. P. H. Brown—1 and 2.—Our bee-literature is up with the times, and can be found in pure doses. Those who don't want it pure, can also be gratified in taste by swallowing it with a bit of onion, cabbage, chicken, seed, or, if need be, with a text and sermon.

J. E. Pond—1 and 2. I think the bee-literature is working out its own salvation in pretty good shape. The editors keep pretty closely in touch with their subscribers, and know better than I can teach them, what is desired and what is not. I should leave the matter to them.

H. D. Cutting—1. The literature is all right, but the honey all wrong. Let us have more honey, and the literature will take care of itself. 2. There have been too many *subscribers eliminated*. What the literature wants is more subscribers, and then the literature will be all right.

J. M. Jenkins—1 and 2. I don't know. But I would like to see Dr. Miller punched off the fence, and be made to realize that he *does* know. Then, let Doolittle put some clean clothes on his man; and send Rambler a new pair o' pants, to wear awhile instead of those old striped 'uns. That's all I know.

Jas. A. Stone—1. I do not know. 2. I do not know. When any one advises me in any of my affairs on which I have given a good deal of thought, I always have a desire, before following his advice, to know whether he has been successful or not. I will apply this by saying I have not given this subject thought enough to advise as to it.

G. M. Doolittle—1 and 2. The most of our bee-literature ranks even with other literature. Tell us how *all* literature can be improved, and I will tell you how "our present bee-literature" can be improved. Our editors are sharp, wide-awake men, and give that which all are satisfied with, except those whose names could consistently be placed in the "Growlery."

W. M. Barnum—1. I would like to see this Query-Box department in every bee-journal. It is in my estimation one of the most valuable features peculiar to our bee-literature. It should be of equal worth to both beginner and "old veteran." 2. The long-spun, of-little-importance article. Sectional departments. Make the journal apply to the country over. Short, "kinky" editorials, void of personality, etc.

QUEENS!

Now ready by return mail, reared in full colonies from the best honey-gathering strains in America, at the following very low prices:

Tested	each $1.50
"	per ½ dozen 8.00
Warranted purely-mated	each .75
"	per ½ dozen 4.25
"	per dozen 8.00

If you want **Queens for business**, get my old reliable strain. 40-p. descriptive Catalog Free. **W. W. CARY, Colrain, Mass.**

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THE OLD RELIABLE

PEERLESS FEED GRINDERS

Grinds more grain to any degree of fineness than any other mill. Grinds ear-corn, oats, etc., fine enough for any purpose. Warranted not to choke. We warrant the Peerless to be

THE BEST AND CHEAPEST MILL ON EARTH.

☞ Write us at once for prices and agency. There is money in this mill. Made only by the

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Jobbers and Manufacturers of Farm Machinery, Carriages, Wagons, Windmills, Bicycles, Harness, etc. Prices lowest. Quality best.

Mention the American Bee Journal. 34A26

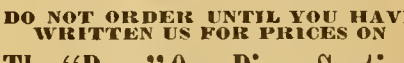
ITALIAN BEES AND QUEENS.

Queens, 75 cents, or two for $1.00.

Mrs. A. A. SIMPSON,
29A8t SWARTS, Greene Co., PA.
Mention the American Bee Journal

DO NOT ORDER UNTIL YOU HAVE WRITTEN US FOR PRICES ON

The "Boss" One-Piece Section



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We have completed a large addition to our Factory, which doubles our floor room; we are therefore in better shape than ever to fill orders on short notice. **Send for Price-List**

J. FORNCROOK,
WATERTOWN, Jeff. Co., WIS., Jan. 1st, 1894.

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Address, W. F. & JOHN BARNES,
45Ctf No. 995 Ruby St., Rockford, Ill.

The Adels—A New Strain of Bees

Friends, I shall be prepared to fill orders for **Adel** and **Italian Queens** June 1. Try them Warranted, $1; Tested, $1.50; Select Tes., $2.
23C **Joseph Erway, Havana, N. Y.**
Mention the American Bee Journal.

3-Frame Nucleus and Italian Queen —$2.50.—

Untested Queens, 75c.; Six for $3.50.
Discount on Quantities.

FULL—LINE—OF—SUPPLIES.

I. J. STRINGHAM,
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SAVE MONEY ! !

It is always economy to buy the best, especially when the best cost no more than something not half so good. OUR FALCON SECTIONS are acknowledged to be superior to any on the market. The same is also true of our HIVES and BEE-KEEPERS' SUPPLIES, of which we make all modern styles. OUR PRICES will be found as low as those of any of our competitors, and in many cases lower, and you are always sure of getting first-class goods. We also publish THE AMERICAN BEE-KEEPER, a monthly magazine (Fifth year) at 50c. a year, invaluable to beginners. Large illustrated catalogue and price-list free. Address,

THE W. T. FALCONER MFG. CO.,
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☞ **W. M. Gerrish**, of **East Nottingham, N. H.**, is our Eastern agent. New England customers may save freight by purchasing of him.

What's the Use of Keeping Bees

If you do not sell the honey? That's what we are here for. Get our high prices before selling.

C. R. HORRIE & CO.,
Commission Merchants,
224 South Water St., Chicago, Ill.

24A13 *Mention the American Bee Journal.*

I ARISE

TO SAY to the readers of the BEE JOURNAL that

DOOLITTLE

has concluded to sell —BEES and QUEENS— in their season, during 1895, at the following prices:

One Colony of Italians on 9 Gallup frames, in light shipping-box	$7 00
Five Colonies.....	30 00
Ten Colonies.....	50 00
1 untested queen.	1 00
6 " queens	5 50
12 " "	10 00
1 tested Queen...	$1 50
3 " Queens.	4 00
1 select tested queen	2 00
3 " " Queens	5 00

Select tested queen, previous season's rearing.. 4 00
Extra Selected for breeding, THE VERY BEST.. 6 00
About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.

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☞ Circular free, giving full particulars regarding the Bees and each class of Queens.

Address

G. M. DOOLITTLE,

12A25t BORODINO, Onon. Co., N. Y.

HONEY QUEENS!

Have been carefully bred for producing comb honey for the past 18 years, and by a special method for producing large, long-lived, prolific Queens. Can furnish either 3 or 5 Banded stock, bred in separate yards. 3-Banded bred from my own or imported Mother. No foul brood or paralysis. Warranted Queens, purely mated, 60 cts.; Tested, $1.00; Selected Breeders, $2.50. Discount on quantities.

27Atf **J. H. GOOD, Nappanee, Ind.**

Free Silver (is a good thing but here's something better) For You

Until further notice I will furnish **COMB FOUNDATION** as follows:

10 lbs. Heavy or Medium Brood Fdn.	$3.50
10 lbs. Light "	3.60
10 lbs. Thin Surplus Foundation. ..	4.00
10 lbs. Extra-Thin Surplus Fdn.....	4.50

No orders will be accepted at these prices from persons living east of New York State.

For BEESWAX—fair quality, delivered here, 27c. cash; 29c. in trade.

W. J. Finch, Jr., Springfield, Ill

28A13 *Mention the American Bee Journal.*

Abbott's Space.

In response to many inquiries I will renew my special offer for a short time only:—

Five "St. Joe" Hives, 1¼-Story, cut ready to nail—no sections—for $3.50 to any one who has never had a crate of these Hives.

I sell Dadant's Foundation at their prices; pay CASH for BEESWAX, and keep a stock of

Shipping-Crates and Other Bee-Supplies.

SPECIAL PRICES the rest of the season. Write and say what you want.

EMERSON T. ABBOTT,
ST. JOSEPH, MO.

When Answering this Advertisement, Mention this Journal.

A THOUSAND TONS OF COMB HONEY

Will be made on the Foundation sold by us this year. That is why

WE NEED BEESWAX.

Now is the time to order your Foundation for 1896. Although the

PRICES ARE REDUCED

on both Beeswax and Foundation for the balance of the season, we want all

The Beeswax You Have to Offer.

☞ Send for Catalogue of **Bee-Supplies, Langstroth Revised, etc.**

CHAS. DADANT & SON,
HAMILTON, Hancock Co., ILL.

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FENCE

Why pay 60 to 90c. a rod for fence when you can make the

BEST WOVEN WIRE FENCE ON EARTH FOR 13 TO 20 CENTS A ROD?

Horse high, bull strong, pig and chicken tight. A man and boy can make from 40 to 60 rods a day. Over 50 styles. Illustrated Catalogue Free.

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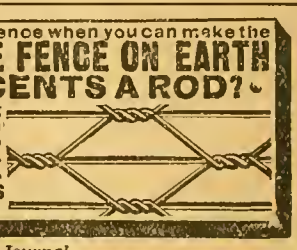

36Etf *Mention the American Bee Journal.*

THE CONVENTION

Will of course take me away from home a few days, but customers need not hesitate on that account in sending for queens, as I shall leave the nuclei well-stocked with Queens, and Mrs. H. can fill orders just as well and as promptly as I can. **"By Return Mail"** will be the motto just the same whether I am at home or not. Single Queens, $1.00; six for $5.00. One Queen and REVIEW for $1.50; one Queen and the book "ADVANCED BEE-CULTURE," for $1.25: Queen, Book and REVIEW, $2.00. Remember that the Queens are bright, young tested Queens, strictly first-class in every respect.

W. Z. Hutchinson, Flint, Mich.

Mention the American Bee Journal

TAKING OFF HONEY

—WITH—

THE PORTER BEE-ESCAPE

Has been styled the Poetry of Bee-Keeping. Saves time, brushing of combs, ugly stings, smoke, uncapping of the cells, robbers, and, in a word, a large amount of annoyance.

Price, 20 cts. each, or $2.25 per Box of One Dozen.

Write to your nearest dealer, or to the A. I. ROOT CO., who have the control of the sale of this implement.

The A. I. Root Co., Medina, Ohio.

PUBLISHED EVERY WEEK AT $1.00 PER ANNUM.

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AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS

35th Year. CHICAGO, ILL., SEPT. 12, 1895. No. 37.

Contributed Articles.

On Important Apiarian Subjects.

No. 8.—Packages for Extracted Honey.

BY CHAS. DADANT.

BARRELS.—This is the largest package which is used for honey. We have used barrels for 25 years, to keep our crop in bulk. We do not know of a single instance, however, where honey was retailed out from the barrel. But we find these very convenient when the honey is just harvested, as they can be handled readily, and are inexpensive. We use alcohol barrels altogether, which can be bought second-hand from any druggist. The alcohol barrels are gummed inside with a sort of glue to keep the alcohol from evaporating, and this glue is useful in keeping the honey from soaking into the wood or leaking.

The barrels should be kept in a dry place when not in use. A cellar will not do, for the wood may swell, and if the barrel should happen to be exposed to heat and drouth later on, the shrinkage of the wood will cause leaks. We keep our empty barrels in the barn, and tighten the hoops on just before filling them with honey. In this way we never have leaky honey-barrels. If the honey is removed before it is granulated, no trouble will be experienced. When the honey granulates in the barrel, it is necessary to remove one head to take it out. This may be done in such a way that the head is replaced after the honey is removed, and the barrel is as good as before. But it is absolutely essential that the head should be put back in the same position as at first. To do this, we mark the head and the chime in corresponding places, and hold the head with a strong gimlet screwed in the center, while taking it out.

LARGE TIN CANS.—These receptacles, made of the size of an extractor can, are used by numerous bee-keepers to keep their crop of extracted honey. One of the advantages claimed for these cans is, that they allow the honey to ripen after it is harvested if the cans are kept in a warm place. As we said before, we do not follow the method of artificial ripening of honey, and therefore this advantage of the cans is of no use to us. But the cans have some disadvantages. They are expensive, not easily transported, and will rust easily. We find that a barrel will outlast a can of the same capacity. As much of our honey is extracted from out-apiaries, away from home, and has to be hauled in promptly, the can is out of the question. Besides, barrels may be rolled into any house, or shop, or even into barn, without danger from dust, mice, or prying fingers. We had once a crop of 85 barrels of clover honey. We had not a building large enough to house the crop except our barn. Into the barn it went, and remained until winter. Cans would have been out of the question.

Another difficulty with the large cans, is to remove the honey after it is granulated. We have often had honey so hard that it took a spade to dig it out. But a spade will cut the sides of a can while it is harmless in a barrel.

THE 60-POUND CANS.—We now come to a package which is nearer to the retailing package than those already mentioned. The 60-pound can owes its reputation to the fact that a great many grocers are willing to buy it and retail the honey out. This package is also within the limits of the purse of well-to-do consumers. For this reason, we think it is quite likely that this package will come more into favor every day.

THE LARD-PAILS.—These pails, the flaring lard-pails—which our old Friend Root has decorated with the name of "The Improved Dadant Pail"—are a good package, and one of the advantages of this style is that they can be shipped, when empty, in a rather comparatively small compass, owing to their "nesting" inside one another. We have for 20 years, or more, retailed the greater part of our honey crop in pails very similar to these, and which we use yet. We handle four sizes, weighing, when full, 10 pounds, 5, 2½, and also a small can holding only 1¼ pounds. These are usually weighed gross, honey and all, and the weight of the pail helps to pay for its cost. It is with this package that we can reach the masses—the consumers who are unable to spend much for delicacies, and who want their money's worth of what they buy. When honey sells at wholesale for 7 cents per pound, the bee-keeper may put up his honey in tins and furnish it to his customers in small-sized packages for less than 10 cents per pound. This is the best way to get rid of a large crop of honey. Too many of our bee-keepers sell their honey on the large markets, and glut these markets, for the want of a little forethought and a little painstaking to supply their own home market. When honey is put up in attractive shape, thousands of pounds find their way into the consumers' hands directly from the producers' home.

We never put up our honey in cans directly while extracting, but transfer it to the cans from the barrels, as occasion requires. It takes a little more time, but the honey is more clear, having had time to get rid of the impurities which may be taken out with the last gallon of liquid honey drawn, or may be scraped from the surface of the honey when the barrelful is granulated.

GLASS JARS.—These are also much in vogue for the retailing of extracted honey, and some of the largest dealers in honey, Messrs. Muth & Son, of Cincinnati, use this sort of package extensively. We have never liked this package, owing to the danger of breakage, the expense and weight of

the glass. Besides, when the honey granulates, it does not look well in glass.

Our advice to those bee-keepers who wish to try the home market is this: Put up your honey partly in the 60-pound cans, and partly in barrels, and fill it into tin cans of different sizes as occasion requires.

To those who wish to handle the honey but once, and sell it in a lump on the large markets, we will give the advice of putting it all up in the regular 60-pound can. But let every one remember that a good market for honey, and a good paying price for the honey, cannot be secured unless one works for it. Hamilton, Ill.

[This is the last of the interesting and practical series of articles on "Extracted Honey" begun by Mr. Dadant in the first number of the American Bee Journal for 1895. In future numbers, there will be published more from the same source, though probably on other equally important subjects relating to bee-culture.—EDITOR.]

Brine Method of Caring for Empty Combs.

BY J. A. GOLDEN.

Every once in awhile the question is asked, "How shall we keep the moth-worms out of combs?" and the answer in general is, "Fume with sulphur," which is always a very unpleasant task. Therefore, Mr. Editor, I wish to give the bee-keepers my method of preserving combs, for all persons that have ever had brood-combs to take care of know that it requires vigilance in the strictest sense, to be successful, and then one finds he has combs that must go into the wax-extractor; besides, it always ruffles my temper to have a nice brood-comb mutilated by the pesky moth-worm, more than any other mishap in bee-keeping.

Having had entire success in curing bee-paralysis, of the most malignant type, and every case treated has remained permanently cured up to this time, not even one bee has ever shown the least symptom of the malady; although some of our great, good, and wise bee-keepers have honestly differed from me in their opinions, after testing the remedy, from the fact that they did not succeed in curing the malady; while I believe all admitted that their bees did not die off nearly so fast as previous to treatment, at the same time there are many who have proved the salt remedy efficacious, so far as I have been able to hear from—so I use the same remedy for moth-worms.

Having accumulated a good many beautiful combs, from one year to another, and it worried my patience to find every once in awhile a mutilated comb, caused by the moth-worms, I sorted out 40 beautiful, unsoiled combs, and the balance I rendered into wax. I made a strong salt-brine, and fully saturated the 40 combs with the brine; this was done over two years ago, and there has never been any trouble from the moth-worm since. If the treatment proves effectual against the ravages of the moth-worm, bee-keepers ought to know it.

My plan of treatment here at the house-apiary is as follows (and after treating three or four combs one can treat them quite speedily and effectually, remembering that a thorough test is always the surest road to success in any problem in life—anything short of this causes disputes, contention and unpleasant sayings, and a failure in the end):

Make, say one quart of brine, putting in all the salt the water will dissolve. Take an empty brood-frame, cover one side with wire-screen, by tacking it on with small tacks. Spread on a table an oilcloth, take a brood-comb, lay it on the table, and pour the cells, on one side, full of brine (I use a gum sprinkler). Then lay on top the frame with wire-screen. Lay on the table another brood-comb, lift up the comb full of brine and turn over and hold it over the empty comb, and give the frame a quick upward jerk, and the brine will quickly pass into the cells of the empty comb. Drop the screen-frame on the comb just filled, and lay the comb just emptied down on the table, the other side up; pick up the one now with the screen on top, turn it over the one just emptied, and with a quick upward motion you will complete the comb. Thus you continue the work, refilling and emptying until all are treated. The brine should be quite warm, and will adhere to the cells better.

The wire-screen prevents the combs from breaking when throwing the brine out with the sudden upward motion or jerk. When the combs are dry, they will look frosty; thus they can be laid away, and, when wanted for use, give them a good rinsing in a boiler of tepid, clean water, when purer combs cannot be given to the bees. This is the experience of the writer. Reinersville, Ohio.

What Dr. Miller Thinks.

THE SWARMING HABIT.—Bert Lownes, on page 549, makes a strong argument against the possibility and desirability of breeding out the swarming habit. He says the desire to swarm "has existed ever since the bees were created, and I can truthfully say, will exist until they become extinct." That settles it that there is no possibility of getting rid of swarming, except for one fatal defect, that no proof of the truth of that statement accompanies it. Even supposing he proves that bees have always swarmed, he would need to prove that they will swarm, and always have swarmed when not at all crowded, etc.

As to the desirability of getting rid of the habit, he is not so positive. He only *thinks* that no drones would be reared if there were no swarming. But others may *think* they would be reared if swarming were forever to cease, so the matter of desirability stands just as it did before.

There is some encouragement in knowing that Mr. Lownes has faith that it is both possible and desirable to prevent swarming. I confess that my faith in that direction is not as strong as it once was—that is, my faith in its possibility—and if he will give us some practical way for the prevention of swarms, I'll not quarrel with his views as to the swarming habit.

THE KINGBIRD.—I'ts very kind in Bro. Ford, on page 553, to comfort us with the thought that the kingbird confers a benefit by killing off the unnecessary population of our hives, but the thought will not down that we might discriminate more wisely if the destruction were left to us instead of the kingbird.

AN APOLOGY.—I hereby apologize to Bro. Abbott for hinting at the possibility of his making a mistake. And now, Bro. Abbott, please refer me to the page in Gleanings from which you quoted "Sweet clover is a sort of weed," that I may take that editor of Gleanings in hand. Just a postal.

RIPENED HONEY.—So important is the matter that I make no excuse for again referring to the words of Mr. Pringle, quoted on page 555, on which Mr. Abbott has so forcibly and wisely commented. I think it is true that the average sample of extracted honey on the market is not as good as the average sample of comb honey, and I further think it could be and ought to be better. For comb honey must be snow-white to bring the highest price, and if taken while the comb is snow-white, the contents of the comb will not be as rich and good as if left longer on the hive. This richer and better honey we can have with the extractor, and if every bee-keeper took pains to put none but such honey on the market, I don't believe there could be the same difference in the price of extracted and comb that now exists. People are willing to pay

more for comb honey because it looks better, but they also pay more for comb honey because in general it *is* better.

The Chicago Convention, according to an item on page 556, is to be during the week of the Fat Stock Show; but the same mail that brought that notice brought the Chicago Record, saying there would be no Fat Stock Show on account of the collapse of the Coliseum. Now, what's going to be done? The convention should be only at such times as give low railroad rates.

A Model Apiary.—According to that article on page 557, the main thing in a model apiary is to have such arrangements as will not allow swarms to cluster out of easy reach. Why not secure that by having all queens clipped? One advantage is, that you can clip your queens without waiting, but you can't get trees to your mind without much waiting.

With regard to evergreens, my experience does not agree with that of the writer. A number of evergreens are about my house, but no swarm in all the years has ever lit on one. Fruit-trees are, however, nearer to the apiary. But I had for several years an out-apiary in a beautiful grove of evergreens, and I never knew a swarm to alight on one of them. By preference they took a small deciduous bush farther away. But it is also true that I never saw many swarms there.

Bee-Swarming Hours.—The difference of observation mentioned on page 558, may be very simply accounted for by the fact that B. Taylor has not only had a long experience, but an experience with a large number of colonies. The longer his experience, and the greater number of colonies kept, the more exceptional cases, and the more exceptional some of the cases. I've had swarms as early as Mr. Taylor, but I'm not sure I ever had any as late.

That Constitution.—Eugene Secor, on page 563, complains that the North American is so overloaded with a constitution that it's in trouble, and thinks the constitution should be short and simple. I'm afraid the executive committee have failed to carry out Section 2, of Article IV, of the Constitution, or he would hardly talk that way. But I suspect, Bro. Secor, that you have forgotten that some of the "overloading" was unloaded at St. Joe. Just turn to page 578, and tell us what there is in the constitution that should be shorter or simpler. And if you find it all right, just send a boy with a typewritten apology to my house. Marengo, Ill.

Cause and Prevention of Smothering Bees by the Bee-Escape.

BY WM. MUTH-RASMUSSEN.

I have just read Mr. Demaree's article on page 502, about smothering bees by the bee-escape. Having had the same experience a few times, I will give the true cause, as I have found it in my case, and also the prevention of this disaster to the bees left in the super, after the escape had been put on the hive.

Lack of ventilation is, of course, the cause, but not the first cause. It is the result of the first cause.

I use wide frames in the super, and a honey-board between super and brood-chamber. When the honey-flow is good, and the sections are left in the super until they are fully finished, the bees will often build burr-combs between the honey-board and the wide frames, filling these burr-combs more or less with honey. When the super is raised, to place the escape-board underneath, these burr-combs are broken. Now, if any of them happen to be directly over the entrance to the bee-escape, or under the exit, the bees cannot go through. If only the exit is stopped by burr-combs, the bees will crowd into the escape from above, jamming each other until those already in the trap are smothered to death, when they soon swell and effectually stop all ventilation from below. This, of course, causes the smothering of all the other bees in the super.

Now for the prevention: When I put on escapes, I always carry with me a box-scraper and a tin pail. After loosening the super from the honey-board, by inserting a strong butcher-knife between them, I raise the right-hand side of the super and peep underneath. If I see any burr-combs likely to interfere with the exit of the bees, I take the scraper, and with a few quick strokes remove the burr-combs directly over and under the trap in the escape-board, as it will be when it is in position. My assistant has in the meantime kept the bees back with the smoker. After dropping the scraper into the tin pail, I raise the super with both hands, while he puts the escape-board in place, and I then let the super down. The whole is only a moment's work, and since I have practiced this, I have never lost any bees by smothering in the super.

Independence, Calif.

Migratory Bee-Keeping in Michigan.

BY J. A. PEARCE.

On page 461, it says a migratory bee-keeper from Kalamazoo had gone to Frankfort, Mich. Now, I wish to make a little correction. I am not from Kalamazoo, but from Grand Rapids, and I am identified with her interests. I do not know why any one should say I was from Kalamazoo, unless he must have thought I had escaped from our splendid asylum located there, as you naturally suppose that any one who would move right off into the wilderness of the north, with a carload of bees, without saying anything about it, must be a little "rattled." Even the engineer of the switch-engine that placed my car to be unloaded, thought I was a little "off," I guess, for he asked me if I was going to let those bees loose in the woods; and if I thought I would ever find them again! I told him I thought I would have no difficulty, as I had a little horn that I could blow, and as soon as the bees heard it they would all come flying to me! "Well," he replied, "that is a wonder!"

Now the facts about this business are about like this: The conditions we have had at my home have well-nigh paralyzed the honey-business there. Last year I had 80 good colonies in the spring, and in the fall I had 80, and about 300 pounds of honey. And last spring in looking over the field, I could not see anything encouraging, and already a drouth had set in that bid fair to be what it has been—the worst that the south half of the State ever saw. So I came in and told my wife that, although I was of a hopeful turn of mind, I could see nothing that the bees could get to live upon, and we should have to go to a good deal of expense to barely hold them where they were, if they then did not "go up," and next year must be even worse than this; and if she thought she could care for the chickens, and the man for the raspberries, if there were any, I would pack my bees and start for Benzie county with them. She did not quite favor the proposition, but owing to the condition of things she yielded.

So one morning I commenced to put the screens on the hives, and before the next morning I was well on my way towards Frankfort-on-the-Lake. There were two large loads of fixtures, and two loads of bees—76 colonies. We hauled them 5 miles, took the fixtures in the afternoon, and as soon as the bees would go in (and that was not very early) we shut them in and started. It was nearly midnight when I kissed my loving wife, caught up my grip that she had carefully packed, and took my departure from our lovely home in the hills, surrounded with its 40 acres of nearly all kinds of fruit. It was with some misgivings that I went, myself. It was no Sunday-school picnic, and if any one should attempt to follow

me in this, I wish to say it is not an easy thing to make your arrangements and get ready a carload of bees in so short a time, and only a strong conviction of duty prompted me to do it.

I wish to say right here that my car was attached to the passenger train, and very nicely handled, and the moving was quite a success. I lost only a part of two very heavy colonies that completely choked the screen that was all over the top of the hives.

As to how much honey I shall get, I am unable to say, but I am getting some, and the bees are in the finest condition I ever had them. I shall put them up to about 100 colonies, besides selling enough to pay for bringing them here, and have the honey I get to help cheer my wife next winter, for so valiantly taking care of the chicks and fruits while I am away.

It was my intention to take the bees home again on the ceasing of the honey-flow, but my mind is changed, and I shall pack them here.

You naturally ask what they get to feed on here. Well, there are the usual spring things, and some fruit-bloom, as this is going to be the best fruit county in the State; then comes red raspberry, and I want to say that it is yielding yet, as some pickers told me yesterday that the bees were just swarming on it up in the woods, and I also have seen for myself. Then comes white clover, and the latter part of June commences that wonder of a honey-plant—the Epilobium, that this morning they seemed to be working on as hard as ever. It lasts well up till frost, then when it is at its best basswood comes, and for reasons I have not time to explain here, it lasts nearly a month—it is going a little yet. The golden-rod is just opening—there are miles of it; and sandwiched in with these are catnip, milkweed, thistles, buckwheat, etc. In short, it is wild feed instead of tame that we depend upon. And we have had rains, and it is raining while I write this little description of my migratory bee-keeping to set myself right before the bee-fraternity.

Frankfort, Mich., July 30.

Starting an Apiary in Calif.—Keeping Combs.

BY DR. E. GALLUP.

Many eastern correspondents ask me about starting an apiary in California. In the first place, you want to select the locality, and in many cases it costs considerable labor to make your road, but in other localities the labor would be but a trifle. You can purchase your bees in movable-comb hives for from $1.50 to $1.75 per colony; or, if you take one season, you can gather up your colonies for a trifle, or get a small start, and then make your bees, as the climate is such that one can increase very rapidly in the valleys, as you have from the middle of March to the middle of October to do it in—seven months.

In the mountains, or foot-hills, you want an extracting-house. Some use a cloth tent at first, but a house of rough lumber and redwood "shakes" can be built very cheaply, and one can live in the cheapest kind of a house, or can live in a canvas tent the entire year, as many have done until they get a start.

Of course you want an extractor, also a sun wax-extractor to melt the cappings, pieces of combs, old combs, etc. Then you want to preserve all spare combs from the moths. To start with, you can dig a square hole in the ground large enough to hold the supers with the surplus combs—not in the hole, but over it. Place some scantlings over the hole, and pile up the supers containing the combs, side by side, and six or eight supers high; put covers on top, and over the whole place a canvas to keep in the smoke. Bank up tight all around the bottom supers. Dig a small trench 3 or 4 feet long out from this square hole, and cover with a strip of old tin or sheet-iron. This trench is to put the burning sulphur in. Melt the sulphur in some old kettle, and when melted saturate old cotton-rags with the melted sulphur, and when cool keep a lot on hand ready for use at any time. Then all you have to do is to set fire to some of those sulphured rags, and place them in the trench, and cover it up, and it is a very short job to fumigate the combs as often as required. It is poor policy to allow the moths to destroy combs.

Now I have told you how a poor man with little means can start an apiary. If one has the means, he can build a small, tight fumigating-house to hang the combs in, and then he has it on hand at all times. When we have good seasons right along in succession, the bees take care of their own combs, but when we have a season like the season of 1894, and lots of our bees die, or we have spare combs that we do not use for any cause, then it pays to preserve them, as with the ready-made combs one can, if he knows how, build up his apiary in short order, and have the bees on hand and ready for storing by the time the harvest commences in this glorious climate.

If bees are cared for as they should be, there need be but very little loss. Understand, we do not have to prepare our bees for winter as those do in the East. We can set down a hive where we want it, and there it stands year in and year out.

Now, do not take my word for anything, but come and see for yourself. I know many a poor man that came here, all broken down in health, went into the mountains and started a bee-ranch in the most primitive manner, and came out all right, with excellent health and independent. Neither do I wish to advise any one, but I am trying to give facts as I see them. I have been in this State over 15 years, and I confess that I am enthusiastic over our country and climate. Now what are *you* going to do about it?

Santa Ana, Calif.

P. S.—I ordered six queens from a Massachusetts breeder, and they were 11 days on the road, owing to washouts in Arizona, and other delays, and they arrived with not a single dead bee. They were put up in quite a different manner from what they used to be when I was a bee-keeper. E. G.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

Eight-Frame Hives—Management of Bees.

"'Eight frames are not enough for some queens,' and similar expressions, are still found in the pages of some of the bee-journals. I cannot help wondering how long this fallacy will last.....To hear some talk, one would think that 'cramping a queen for lack of room,' was one of the most disastrous things possible for a bee-keeper to do."—W. Z. HUTCHINSON, in Review for July.

Look here, Mr. Hutchinson, you needn't think that you and Heddon know everything, and what you "don't know" is not worth knowing. Whatever may be right with yourself, and in your locality, is not necessarily the best everywhere else, and in everybody's hands. Cramping the laying of a queen by lack of room, with me, means invariably a swarm instead of a surplus of honey, and is certainly unquestionably "disastrous" so far as my pocket-book is concerned, and this is not a "fallacy," but an incontrovertible fact.

Let us look at the question carefully.

The amount of brood reared by a colony depends on four factors:

1st. The strength of the colony.

2nd. The prolificness of the queen.

3rd. The temperature.

4th. The amount of room, or rather of empty comb, for the queen to lay in.

Of course a honey-flow is supposed.

The 1st condition is evident. No matter how prolific a queen can be, no more brood will be reared than the colony can take care of. The 2nd and 4th are also evident. The 3rd deserves a little more consideration. During the early spring, the temperature is too low to permit any more brood reared than the bees can well cover. That is, only the space occupied by the cluster of bees is kept warm enough for brood-rearing and also for comb-building. As the weather gets warmer, the cluster will expand, and even if the colony is not stronger, the amount of brood will be greater. During the summer, in July and August, when there is no need of keeping the brood covered all the time, the bees will be found scattered in the whole hive, and even a small colony will rear a considerable amount of brood.

Now, for your case.

You first go into winter with rather weak colonies, of old bees, at that. Don't you say it is not so? It must be. With your system of curtailing brood-rearing in the summer, for fear of boarding "useless consumers" during the balance of the year, you cannot have very strong colonies in the fall. After a long, severe winter, you come out in the spring with weak colonies of old bees. These old bees disappear rapidly, and on account of the low temperature cannot rear any more brood than they can cover. It is fully four weeks before the young bees begin to emerge. You have now only four weeks more to build good, strong colonies just before the honey-flow begins. I mean the honey-flow upon which you depend for surplus. Four weeks with a weak colony of old bees, a small amount of brood ready to hatch, or rather to emerge from the cells, cannot build such a very big thing, and I have no doubt that with your management, and in your locality, your eight frames are enough.

Well, you are now at the eve of the honey-flow, with your eight frames full of brood, rather than bees, your queens wanting to swarm badly because they are cramped for space, and what is of more importance yet, only a few weeks to gather your surplus. Under such circumstances, you let them swarm, throw as many bees as possible in the swarm, and by contracting the brood-nest, hiving on starters, etc., contrive to make the swarms produce as much surplus honey and as little brood as possible. Now, if I am mistaken, please correct me.

In my locality the honey-flow can be divided into three periods, viz.:

1st. The maple and fruit blossoms from the middle of March until about May 1, or a little later.

2nd. The second period, from May 1 to the middle of June, the principal sources of honey being the poplars, white clover and honey-dew. The poplars are very scarce in this locality; the white clover depends on the abundance of rain, and does never amount to very much. The honey-dew is either nothing, or next to nothing, or very heavy, so the honey-flow during that period of about six weeks, is a very variable and very uncertain quantity.

3rd. The third, and I might call it the white honey period, from the middle of June to the middle or the end of July, more or less. The chief sources are the persimmon, wild grapes, and mainly the sourwood; also the basswood, where there is any. (There is not a single basswood tree in this neighborhood.) This third honey-flow may be more or less, but never fails.

The winters here are not what they are with you. Our bees are invariably out-doors, fly very often, and rear more or less brood during the winter, and generally come out in good condition, except, of course, the cases of starvation, queenlessness, or sometimes robbing during the winter. By the first of May they are about ready to swarm, but during that time, a prolific queen, if allowed room enough, and with a colony in good condition, can fill with brood a hive of 11 Langstroth frames as well as one of eight, and thus make a colony 50 per cent. stronger. Many times, with a small hive, swarming will occur during April, with a fair chance of being repeated later in the season, which last case is "disastrous," sure enough, so far as surplus is concerned.

If I could prevent swarming, and keep up brood-rearing, and thereby the strength of the colony, during the whole honey-flow, I should get a considerable surplus. In fact, the colonies that occasionally have not swarmed, have invariably given me more surplus than any colony and its swarm have ever done. Of course, I am not speaking of colonies not having swarmed because they were too weak, but of those of full strength.

If I hive the swarm upon a new stand, and let it build up, being strong in bees it will soon be in good condition, and may give me some surplus during the third period of honey-flow. The old colony having all the brood and some old bees, will build up sooner than the swarm, and generally give a fair surplus of white honey. Remember, that when swarming occurs here, I have yet about ten weeks of honey-flow; the first half of it very uncertain, and producing mostly inferior honey, and the last half producing white honey, and so far has never failed, but neither one can compete in abundance of nectar with your basswood flow.

As far as I have tried it, your system of management, as described in the "Advanced Bee-Culture." is a complete failure in localities like this. The old colony removed, and deprived of as much of their bees as possible, cannot build up in time to store any surplus. The swarm will gather a considerable amount of dark honey during the first few weeks, *if there is any to gather*, which is not always the case—probably only one year out of two, taking all together. After a few weeks the old bees have nearly all died out, very little brood has been reared, and the swarm is too weak to store any surplus white honey.

And, after all, is your management the best, even in your own locality? That you have obtained good results with it is incontestable, but could not as good results be obtained otherwise? The Dadants are in a locality exactly similar to yours, except that they have no basswood, and they have as good "crops" of honey as yours, and by an entirely different management. You say that it is because they produce extracted honey. That's right; but they produced comb honey for a number of years, and it was during that time that they made their experiments with different sizes of hives and different methods of management.

ADRIAN GETAZ.

Knoxville, Tenn.

The Alsike Clover Leaflet consists of 2 pages, with illustrations, showing the value of Alsike clover, and telling how to grow it. This Leaflet is just the thing to hand to every farmer in your neighborhood. Send to the Bee Journal office for a quantity of them, and see that they are distributed where they will do the most good. Prices, postpaid, are as follows: 50 for 25 cents; 100 for 40 cents; or 200 for 70 cents.

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Starting in Bee-Keeping.

I desire to go into the bee-business. 1. How many and what kind of bees should I buy?

2. Will it pay better to buy large colonies in April and May, at $1.00 per colony, or pay $2.00 for them in the log-hive? I have had some experience with bees for about five years. J. A. S.

Tracy City, Tenn.

ANSWERS.—1. Two colonies is a good number to start with, but as you have had experience you might add to that number according to your experience, perhaps starting with 10 colonies. Get the nearest you can to pure Italians, but if you can't get Italians near by, get blacks, or any kind you can, and then Italianize them.

2. Better get the swarms at a dollar each, and have them put into good, up-to-date hives with movable-frames.

Carrying Out Brood—Pea-Bloom and Golden-Rod.

1. My bees are carrying out the young brood about half ready to hatch. Can you tell me the cause? They lie out over the hive and don't work much, doing nothing in the supers, but carrying in some pollen.

2. Do bees gather honey from pea-bloom and golden-rod?

Dyersburg, Tenn., Aug. 21. H. M. P.

ANSWERS.—1. The probability is that they are getting so little stores that they think they can't afford to support a lot of drones, so they are carrying out the half-grown drone-larvæ.

2. Yes, but I don't know how much. There's great diversity of opinion as to the value of golden-rod as a honey-plant. Some say it yields well, others say it doesn't amount to anything. Probably it acts differently in different places, and perhaps at different times.

Wintering Bees—Why Did they Swarm?

1. I winter my bees out-of-doors in 8-frame dovetailed hives, with supers filled with chaff, and find that much frost gathers under the flat covers and melts when a thaw comes, and runs down, wetting the chaff more or less at the ends and covers, which afterwards freezes and sometimes molds. How shall I avoid this trouble?

2. Is it better to let the bees have 8 frames, or to remove the two outside ones and replace with chaff-packed division-boards?

3. I had a fine, large swarm to issue Aug. 10, at 4:30 p.m., when honey had been so scarce for a month that bees could hardly gather a living. The weather being very hot and dry, I opened the hive and found some queen-cells nearly finished. Why did those bees swarm? J. M. R.

Viola, W. Va.

ANSWERS.—1. There must be sufficient leakage to allow the moisture slowly to escape before it condenses on the cover or walls. Some have an inch hole covered with wire-cloth, in one end of the cover or cap.

2. Counting trouble and all in the case, I believe I'd leave the eight frames as they are. You may tell better by trying both ways side by side.

3. It's hard to account for all the freaks of bees. From what you say I can't see any reason at all for their swarming. Possibly their being in a hot place may have had something to do with it.

Wintering on Langstroth Frames on End—Rearing Queens in Upper Stories.

1. In "What Dr. Miller Thinks," on page 454, you say, "What will be the use of alternating the frames, etc.?"

There may not be any advantage in it after all, but I have seen it in print so often, that the right way to winter successfully is to have a deep hive with plenty of capped honey in it, so that the *whole* cluster will have food enough over them to last them until spring without their having to move in any direction but up, and not break cluster at all; and it seemed so plausible that I had come to think it was the correct thing, and have been experimenting in that direction for several years. I have up-ended the whole hive, which was a bad mistake, as there was not room enough below the frames, and the dead bees clogged between the frames and made a mess. Then I tried two bodies high, with 4 and 5 frames in each, and both sides packed, and in only one of eight did they stay in the lower story. The rest all went to the top, and left capped honey below.

Last winter I tried the plan as reported in the Bee Journal, with perfect success as far as loss of individual bees was concerned, and incidentally as far as consumption of food (notice the last sentence in "Experiments on Wintering," page 459), but not in having them stay at the bottom of the hive and work up gradually as they consumed the honey directly over them. One reason why not, was that when I up-ended the hives in the fall, about all the frames were half full of capped honey along the top-bar, with a little capped brood in some (the laying was over), and they were fed on top until the empty cells were filled and capped over half way down. Naturally, the first food consumed was the uncapped in the lower quarter of the frames. After they had gotten up that far, they concluded they might as well keep right on and go to the top where it was warmer. They know when they feel good, just as well as "homo" does.

Well, you can see by alternating the frames there will be old capped honey in one frame, and empty cells in the other frame next to it—a regular zigzag in the lower half of the frames, and they will not have the same chance to go up that they did last winter. I want to keep them down, even if they winter as well at the top, just from the idea that it seems more natural that they should breed in the lower part of the hive first—they do all summer, why not in spring?

I have 14 colonies, and they will all be wintered on five frames each, stood on end, next winter, and that will tell the story with me about wintering.

I write this to you because I would like to have you try some (say 10) the coming winter, and see how it works at Marengo.

I take notice that some old writers of the American Bee Journal are hinting that perhaps it might do to stand the shallow-frame hives on end; and, between you and me, they will try it, but they won't "let the cat out of the bag" until the spring is over.

2. I tried Doolittle's plan for rearing queens. I could not get a cell started in the upper story. I then got capped queen-cells from a brood-nest, and put one each on a frame of brood in the upper story of six hives (middle of clover); two were torn down; two others, queens found dead on the queen-excluder; two others that I saw, queens alive. I could not find any at all in a week after, with two excluders between the two bodies—(of course a hole for exit was in the upper body). Good thing in Borodino, N. Y.; no good in Lancaster, Pa. Ergo; you might find it so with up-ended frames, but I doubt it. T. T.

Lancaster, Pa.

ANSWERS.—1. Your statement was that sealed honey would not keep the bees from going to the top, and from that one would understand that in any case bees would go right to the top, in which case alternating the frames would do no good, for even if the frames were all filled with honey, the bees would go up through them to the top. I'm rather inclined to the opinion that you mean they will go through sealed honey in a lower story to get up into the upper story. If I am not mistaken, bees seem to like sealed honey over them, and if they are in a hive full of sealed honey they will stay just under it, working their way up as the honey is eaten. With the frames on end, there were empty cells all the way to the top, and, as you found, the bees followed those empty cells to the top. I'm a little afraid you'll not find the thing so very different even with the zigzag arrangement, for the empty cells will still have some effect, even if alternated with sealed combs. I suspect, however, that you can accomplish your purpose to keep them down by setting the frames on end quite early, or right away. In that case the bees would have time to seal up the honey above them, and thus there would be no empty cells to lead them up. You might help the matter by uncapping all the honey in one-half the frame at the time of setting on end; that is, in the part that will be the lower half when set on end, but it will hardly be wise to do this unless done pretty early. If done too late, I think the bees will carry the unsealed honey to the top and seal it there.

2. I suspect that the same management in Lancaster would produce the same results as at Borodino with regard to

rearing queens in upper stories. In order to get queens reared in upper stories, there must be a certain amount of isolation, and if you fall short of that, the thing won't work. Try this: Put a cloth between the two stories, so that there is only a little space at the sides for the bees to up through; and, if that doesn't work, put two stories of empty frames between the brood-nest and the upper story that has the brood in.

Dividing a Colony.

We have a very large colony of bees in a box-hive. If I should drum them out in fruit-bloom, next spring, and leave enough bees in the box-hive to keep the brood warm, would they not rear themselves a queen in the time they were hatching out the brood? If not, how shall I proceed, as I want to make two colonies of the one in fruit-bloom, next spring.

Peris, Oreg. W. D. M.

ANSWER.—Yes, if you leave enough bees in the hive to take care of the brood, in about three weeks from the time you drum them out, they will have a new queen laying. But now look here, unless they are stronger than most colonies are at the time of fruit-bloom, you may do mischief by dividing them at that time. It will be a good deal easier for you, and most likely better for the bees, to wait till they swarm naturally; but if they don't swarm then and are strong, it may be well for you to take things in your own hands.

Seems to be Bee-Paralysis.

What ails my bees? They are dying off in one colony by the hundreds every day. They turn very black, shiny and slim, and become unable to fly well (with some exceptions). Then the well bees fight them and drag them from the hive. I sometimes see similar actions to those asked about by "H. C. T.," on page 522—a struggle between two bees, the well one dragging the other to the ground, a separation, the sick, shiny one not yet being too weak to fly, hence both returning to the hive. Sometimes the appearance of the sick ones is varied by apparent flattening and enlargement of the abdomen; but I imagine this to be in the earlier stage before becoming noticeably black, slim, or shiny. The bees, until becoming sick, are active, etc., as any other bees. But the colony has been queenless for some time (over three weeks now), and I found them absolutely destitute of honey, and (some days ago) with dead young bees nearly mature enough to come from the cells with the cappings off. I thought that this was possibly the work of the old bees, because of absence of food.

Monterey, Calif., Aug. 20. A. N.

ANSWER.—From your description, it seems to be a case of bee-paralysis. A good many remedies have been given from time to time, as you will see by looking at back numbers of this journal, but it seems that after a remedy is given some one reports that he has tried it and failed to find any benefit. The remedy most commonly recommended is a change of queen, but there may be a doubt whether that has much effect. The truth, I think, is that we are yet in the doubt as to the cause or cure of the disease. In the North the disease usually disappears of its own accord, and amounts to but little, but as far south as you it seems to be a real scourge. I can only repeat to look up back numbers, and try any of the remedies you like, but I don't feel wonderfully sanguine that any of them will do much good.

Drunken Bees—Beet-Sugar and China Sugar—Bee-Literature—That "Dime Smoker."

1. Do you know that bees get drunk on honey around the seductive blackberries, and die? In Oregon thousands perish this way yearly, and whole colonies are disrupted. What is the remedy—a Keeley bi-chloride of gold cure, or total abstinence (on the part of the bee-keeper) in planting blackberries? That awful Australian nuisance—the so-called Oregon ever-bearing blackberry (which some of the Eastern seedmen have nerve enough to ask 50 cents per plant) blooms a long time—over three months under certain conditions—and bees work on them greedily. Now, will it pay to plant them and have drunken bees?

2. Is beet-sugar, granulated, as good for feeding bees as cane-sugar? Is China, granulated (the kind most frequently met here), as good?

3. Why have bee-journals better written articles, more humor, better literary style, and a more scientific treatment of topics than other journals devoted to other branches of agriculture? Is it on account of the "poetry" of it?

4. Could that Doctor (G. P. Hachenberg, of Austin, Tex.,) be made to yield up the secret of his "dime smoker," which he says he described in the American Bee Journal of Dec. 5 and Aug. 8, 1888, for the benefit of those who did not know of the Bee Journal's existence until the last few months?

Yankton, Oreg. M. S. L.

ANSWERS.—1. No, I didn't know bees were so affected by blackberry blossoms. I've read of such things with different kinds of plants, but never saw bees in anything but a respectable degree of sobriety except when working on the Chapman honey-plant. They don't get riotous or fighting drunk, just appear stupid. I've little faith in the Keeley cure, but should try to arouse in the bees a feeling of self-respect, and induce each one to sign a total-abstinence pledge.

Seriously, isn't it possible that only part of the bees are incapacitated for work, and that more stores are carried from the blossoms than to pay for all harm done?

2. I don't know, and I can't find out for certain. Generally we are told that there's no difference between beet-sugar and cane-sugar, and that a chemical analysis shows them to be exactly alike; but across the ocean they insist that beet-sugar is not fit to feed bees for winter, I don't know about China sugar. If it's made of cane, I don't know why it shouldn't be good, always supposing it's properly refined.

3. My dear fellow, you're way off. Bee-literature is in such a bad state that an essay at the last Michigan State convention was read lamenting its decadence, and suggesting that the present writers be shoved out of the way and a fresh lot set to work. Perhaps if the writers of the bee-journals wrote upon other topics you wouldn't find them so interesting. Still, there's A. I. Root, who writes about everything under the sun—from piety to pie-plants—and he's always interesting.

4. Respectfully referred to ye editor.—[Probably Dr. H. will comply with M. S. L.'s request.—EDITOR.]

What Ailed the Bees?

Last summer I had 10 good, strong colonies of hybrids, and about Oct. 1 I moved them from my ranch into town, and they all seemed to be all right after the trip, and went into the winter with a good supply of honey, and seemingly all right. I did not notice anything wrong with them until a warm spell in February, I noticed that two colonies of them had the dysentery, but it came off nice and warm for a few days, and they seemed to get over it. Some time along in the latter part of March it made its appearance again in those two and one or two others, and along the last of April, while the fruit-bloom was out, I transferred them from the box-hives they were in into some new hives with Langstroth frames. A few days before I transferred them I noticed that the ground on a warm day would be just covered with bees crawling away from the hives, and could not fly. I would pick them up and toss them up into the air, and they would fall to the ground. They did not seem to have any use of their wings. After transferring them, they all had an attack of the dysentery, caused, I suppose, from filling themselves with honey when I was transferring them, but I could not find anything wrong with the honey, as far as I could see.

They kept up this crawling away until three of the colonies disappeared altogether, and the remaining seven were very weak.

About two weeks after transferring, I put in Italian queens, and after the young bees from those queens began to hatch out, they began to build up, and the seven I have left are pretty fair colonies now, and nearly all Italians. None of them swarmed this summer, nor stored any surplus honey, but I noticed a day or two ago that crawling on the ground again, but do not see any signs of dysentery, but, on close examination, I find those that are crawling on the ground seem to be swollen, or look as if they might be full of honey, but on smashing one of them, the body seems to be full of that dark, yellow fluid, like the discharge when they have the dysentery. I cannot find anything in "A B C of Bee-Culture" that gives any information in regard to it. A. E. H.

Tacoma, Wash., Aug. 20.

ANSWER.—I'm sorry to say I don't know enough to help you. Something of the same kind has occurred before in Wisconsin, and perhaps elsewhere, but so far as I remember the cause seemed a mystery. I think the trouble disappeared of itself, and I hope that may be the case with you. In the meantime, I shall be glad if any of the friends who can do so, will give information that will help us out.

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Editorial Budget.

The Toronto Convention is now a matter of history. I reached the Bee Journal office this forenoon (Sept. 7), having left Toronto yesterday at 3 p.m. The attendance, as usual, was not as large as expected, but was about like that of the St. Joseph convention. The best work done was undoubtedly that looking toward a union of the North American and the Bee-Keepers' Union. A committee was appointed to perfect plans for amalgamation and submit them to the members of both organizations, who will vote upon them by mail. The committee will also report as soon as possible through the bee-papers.

I will not attempt at this time to go into any details concerning the convention, but will in the next number begin some "convention notes," and also give the first installment of the report. I may say, however, that the following are the newly-elected officers:

President—A. I. Root, Medina, Ohio.
Vice-President—Wm. McEvoy, Woodburn, Ont.
Secretary—Dr. A. B. Mason, Toledo, Ont.
Treasurer—W. Z. Hutchinson, Flint, Mich.

Another Bee-Season is nearing is close. What about the new kinks you have learned during the past year? Suppose you tell us all about them. You'll be helping others by so doing, and they in return will no doubt aid you by giving the benefit of their experience and experiments. The American Bee Journal is here to help you. It's your own fault if you don't get the worth of the money you pay for it.

Is there any question you want to ask? Well, ask it. Send in a description of the results of your season's work, and then compare it with the others. Don't hesitate to report because you can't write like an old-time journalist. Some of the most helpful contributions are sent in by the poorest penmen—by those who can scarcely write a sentence correctly. But they are often the people who possess the valuablo ideas. Write the best you can, and give your very best experiences. Get your facts together, and then on the first rainy day put them on paper, and—mail them to the Bee Journal office.

The National Flowers of some countries are honey-yielders, as they all should be. A few are as follows: Scotland, the thistle; Ireland, the shamrock; Prussia, the linden; Saxony, the mignonette; Canada, the sugar maple; "and finally, that of the United States, adopted by the American Horticultural Society, in 1889—the golden-rod."

Poor Economy.—Some good people have queer notions. For instance, a Bee Journal subscriber who took 30 barrels or honey last year. asks that his subscription be discontinued because he got no honey this year! Now the publishers of this paper don't ask any one to subscribe for it unless he really wants to, but it seems a queer thing to request its discontinuance just because there happened to be no honey taken this year, when such a good crop had been secured last year. Why, one would suppose that after a bee-keeper had a 30-barrel harvest, he would pay his subscription ahead about five years, in order to keep in advance of any poor years that might intervene.

Suppose the publisher of a bee-paper should imitate the above example, and say: "Now this year I've made no money running a bee-paper. I think I'll just stop publishing it—or at least till we have a good honey season again!" Could it be done successfully? Would *you* want the American Bee Journal to do that? Then why not keep up your subscription to whatever bee-paper you are now reading? It will benefit you and encourage the publishers. Who knows but next year a grand honey harvest may be yours? Don't get discouraged, but keep on in the even tenor of your way, with a stronger faith and a more hopeful hope.

Mr. A. I. Root receives all kinds of invitations from admiring bee-keepers. One recently came from Anthony Opp, of Helena, Ark., who wrote: "Come down this fall, and I will give you a bear-hunt." To which Bro. Root replied, in this joking style:

Well, well! I have had invitations that were hard to resist a good many times, but I do not know that I was ever before asked to go on a bear-hunt. Friend Opp, how fast can a bear run when it is right down mad? Could I take my wheel along? Is bear meat good to eat? Suppose you should take me off on a bear-hunt, and I should get hugged to death—what would become of Mrs. Root, and the rest of them, away back here in Medina?

Bro. Root, please don't go. It's all very kind of Mr. Opp to invite you, but really I think it would be dangerous for you. Have you forgotten "Sweet Marie" of the St. Joe variety show? A dancing bear might be more risky than a dancing girl. I *think* a bear has stronger "arms." Better not go down there.

Honey for the Complexion.—In the British Bee Journal a correspondent has this to say about applyiug honey on the face to improve and preserve the complexion:

My wife discovered a remarkable use for honey quite recently. After being out at a theatre and coming home late, she was wont in the morning to look jaded and faded, her skin becoming dry, red, and harsh-looking. One night she tried the effect of rubbing gently a thin coating of honey on the face before going to bed. The result was surprising, and almost tempted me to set up in business as an imitator of the renowned Madame Rachel, who became famous by making ladies beautiful forever. Honey is one of the finest cosmetics in the world, and can be safely recommended to all ladies—and gentlemen, too, for that matter—who wish to preserve a beautiful complexion.

Now, there'll be no excuse for any other than sweet-faced bee-keepers—provided they produce enough honey to put on the outside as well as the inside of their faces!

Mr. D. L. Durham, a bee-keeper living in Kankakee, Ill., called at the Bee Journal office recently. He reported the season quite unfavorable up to the time sweet clover bloomed, when the bees made up for lost time. Mr. Durham thinks there is no honey-plant equal to sweet clover. A good many bee-people agree with him, too.

☞ See "Bee-Keeper's Guide" offer on page 594.

Among the Bee-Papers

Gleaned by Dr. Miller.

DIVISIBLE BROOD-CHAMBERS.

I have over 700 half-story hives, aad do not propose to make or use any other style of hive than the divisible brood-chamber, but have not time now to tell why I like it any better than any other hive.—O. R. Coe, in Gleanings.

CONTROLLING FERTILIZATION OF QUEENS.

"How the Mating of Queens can be Controlled" is the taking title of an article in Gleanings, but it is rather disappointing, as the plan given is simply the old one of trapping all drones from undesirable colonies.

MARKETING HONEY.

To sum all up, I would say, put honey up in the most attractive shape possible, and sell for cash if you can obtain as much into a cent a pound as you think it will bring you when shipped on commission. If you caunot thus sell it, ship on commission to reliable parties, sending 500 pounds and under to each party.—G. M. Doolittle, in Gleanings.

VENTILATION TO PREVENT SWARMING.

We certainly did not have the swarming with the larger hives that we have had with the 8-frame hives. But there may be another reason for that. We always, during the honey-harvest, left a small opening at the back of the hive, for upward ventilation, and a current of air was constantly passing through the hive, that may have helped a good deal to prevent swarming. We have not been giving this ventilation since we have had the 8-frame hive in use. The bees will not finish up the sections quite so quickly at the back end when the ventilation is given, and for that reason we have discarded it. But I'm not sure but it's a good thing to have the ventilation, nevertheless.

For the last two or three years we have been placing small blocks at the corners under some of our hives, raising them ⅜ of an inch from the bottom-board, leaving an opening all around, and I believe it's a good thing. It gives them more air, and it may help to prevent swarming—not that we are troubled with swarms at present. We have not had any this year, and are not likely to have. I'm not fond of swarming bees, but I would even put up with the swarms if the honey would only accompany them.—Emma Wilson, in Gleanings.

PRENENTION OF AFTER-SWARMS.

The best way I know to prevent after-swarms is to have all the bees that can fly go with the first swarm, and this is the way I manage it:

Have all colonies strong, even if it should be necessary to double them up in the spring, so that they will swarm at the beginning of the honey-flow. Then hive the prime swarm on the old stand, removing the super, if any, from the parent hive to the swarm; then set the parent hive on top of the swarm's hive and allow it to remain there two or three days. All the young bees that have ever been out of the hive, when they come out, will go in below with the swarm. About the afternoon of the second day, if the weather has been favorable, the parent colony will have become so depleted of bees that they will give up swarming a second time, and will begin to carry out drone-brood. It is then safe to carry them to a new location; they will not swarm again, but will build up to be a strong colony, and will store some fall honey and be a good colony to winter. In this way we get extra-strong colonies that will store more honey than the two together would if the queen-cells had been cut out. Crowd the brood-chamber with bees instead of contracting it.—Geo. W. Stephens, in Nebraska Queen.

WHY B. TAYLOR DISCARDS DIVISIBLE BROOD-CHAMBERS.

At length I came to the time, as I have told in the June Review, when I had to choose between them; and I had to decide in favor of the larger brood-chambers, upon the ground of utility alone, and for the following reasons: The double brood-chambers cost more to make. I have always sold a single brood-chamber, such as I use, for $1.25, and could not sell two sections of the shallow hive for anything like that sum, for each section costs nearly as much to make as the larger full hive. It is true, there is a little less material in each section of the shallow hives; but in the two sections there is at least 40 per cent. more material, aud very nearly double the work. There are 20 instead of 10 frames; two hive-bodies instead of one, each costing in work and material nearly as much as a single full hive. Now, if I could have secured more honey, or with less work with the double brood-chambers, the increased cost could have been borne without loss; but after 30 years' trial I was *compelled* to know I could not. I at length became aware that I had over-estimated the double brood-chambers. Especially did this become manifest in the last few years of poor honey crops, when the struggle for bread and butter became greater. I have no apology to make for over-estimating the double brood-chambers.

I once believed the double brood-chamber wintered bees better than the full hive; but in the last few poor seasons for honey I have lost heavily in bees each spring, and the colonies in the double hives fared as badly as those in other hives. I now *know* that it is the bees themselves that make wintering (when proper rules are observed) safe. I have long observed that some seasons bees wintered well in all styles of hives, and with seemingly careless management. I now believe I know the cause.

Now, do not understand me as denying that the double brood-chamber has some good points; but its bad features overcome them. I have tested the "shake-out" function, the reversible function, about which much has been claimed; and I *know* that, for practical work, they are *arrant humbugs*.—B. Taylor, in Gleanings.

BEST SIZE OF HIVES.

Concerning the discussion as to big and little hives, Ernest Root says:

"In the meantime, let us not forget that we have had a few "eye-openers." Let us rehearse just a few of them. (1) More bee-keepers are using cubical hives than we supposed. (2) A larger number find the 10-frame hive preferable to the 8-frame than we had any idea of: and (3) it is evident that some bee-keepers are, or have been, getting along with too small a brood-nest; especially is this true in the South and West. (4) Some like divisible brood-chambers that can be contracted or expanded at will, and think this is the best solution of the problem. (5) Others who have tried them do not find them to be an entire success, and have finally concluded there is nothing better than full-sized brood-frames—that is, a brood-nest with a single set of combs.

"But perhaps the biggest eye-opener of all is the fact (6), the 8-frame hive is not as generally accepted as about the right size for all bee-keepers as we have thought.

"Another eye-opener, and closely related to that preceding, is (7) that bee-keepers at large have been running too much toward small sizes in hives, and now the tide is turning slightly the other way. Just where it will land, nobody knows. Now the question rises in view of this, 'Is it wise to stop right here?' I confess I do not know, and ask for greater wisdom of our many readers."

SWEET CLOVER—MELILOTUS ALBA.

Edwin Montgomery, of Starkville, Miss., says this about sweet clover (the great honey-plant) in the Agricultural Epitomist:

"Melilotus Alba is considered only a weed in the Northwest, but in the South it is prized as one of our most valuable forage crops. It belongs to the leguminous class of plants, and hence derives the greater proportion of its nourishment from the air, and the deep subsoil, where the roots of but comparatively few plants can reach and feed. Mowed before the plant becomes too large and woody, the quality of the hay is first-class, and in nutritive quality equal to any of the clover family. In its green state stock is not fond of it at first, but soon acquires a taste. It is a rich milk and butter food. The life of the plant is two years. The usual plan is to mow the plant once the second year and allow the second to mature seed. These seeds fall to the ground and germinate where the conditions are favorable, and thus your land is seeded again for two years more. Seed can be bought at from $1 to $1.50 per bushel, and a bushel will sow four acres. It is partial to a lime soil, and I would not advise anyone to sow it on any land not stroogly impregnated with lime. It will grow luxuriantly during the most protracted drought, due, of course, to the deep extension of its tap-root into the soil. It is said to make first-class hog pasture.

"A commission merchant for the sale of live stock, at New Orleans, says the best quality of beef he ever received from this State or Alabama was made from animals fattened on Johnson grass and melilotus. As an improver of worn soils it

has no superior among leguminous plants. Gen. Stephen D. Lee, President of the Mississippi A. & M. College, of this place, has been growing it extensively on his farm in Noxubee county, Mississippi, and claims that when planted on the poorer portions of the farm, land that would only produce 5 to 10 bushels of corn per acre, the same land now produces 30 or more bushels per acre. It is a plant that is steadily growing in favor with the farmers in the lime belts of Mississippi and Alabama."

CRIMSON CLOVER IN DELAWARE.

The value of crimson clover begins as soon as the plants appear above ground, for then they begin to act as a shade and mulch, and to use and conserve fertility which would otherwise have been leached or blown away. They soon begin to draw nitrogen, for the nodules on the roots are found in great plenty, even in early December, or before. From that on until the busy bee extracts its store of sweets from the blossoms, the roots are lengthening out and searching for food three, four, and more feet underground. We have been told that crimson clover has no tap-roots, and therefore cannot reach down after phosphoric acid and potash; also that its life is too short to accomplish the work which red clover does. The facts are, that it does do it; and it has been proved by chemical analysis. We consider the root arrangement of crimson clover more advantageous, because the mass of roots are in the surface soil, where they are most needed. It can be used with or after almost every crop. None should be used on strawberries; for these, use it the year before the patch is set. It should be sown every year in blackberries and raspberries. It will stand the winter here if sown after sweet potatoes are dug.

No plant we have here equals crimson clover as a honey-plant. It produces every year, and all the time when in bloom, some three or four weeks, according to the nature of the soil and climatic conditions. The growth of the blossom seems well adapted for honey-production, as it grows in length, and the bees work on the new growth until the blossom is full-grown, two or three inches in length, in many instances. The principal trouble here in getting the honey seems to be in having the bees good and strong, and ready. It comes early; and if the bees are ready the sections fill very rapidly, and the honey is excellent.—T. F. COOKE, in Gleanings.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

How to Make the Garden Pay.—The question is often asked as to what is best to combine with bee-keeping in order to make it profitable, but I have ceased to put it in this way, as I am confident that the day has gone by for anyone to depend upon bee-keeping alone for a living, except it be in a few favored locations where are grown extensively forage crops which yield a large quantity of nectar. This being the case, it ceases to be a question of what to combine with bee-keeping, and becomes a question of what industries can bee-keeping be made a part. I look upon bee-keeping as a branch of agriculture, and I am thoroughly convinced that most farmers could make a few colonies of bees add materially to their comfort and income. There are also scores of people in villages and small towns who could keep bees to advantage.

Among the things that may well be combined with bee-keeping, or with which bee-keeping may be combined, whichever way you want to put it, is a good garden. People who have never enjoyed the comfort and satisfaction of a garden do not realize how much they have lost in this world. However, in order to make the garden profitable, it must be an up-to-date garden, and conducted in accordance with modern ideas and methods of gardening. These methods may be learned in various ways, but everyone who has a garden will find a modern book upon the subject of great advantage. I have before me such a book, a revised edition of "How to Make the Garden Pay," by T. Greiner, published by Henry Maule, of Philadelphia; price, $2.00. (This or any other book mentioned in this department will be sent, postpaid, on receipt of price, by the publishers of the American Bee Journal.)

Mr. Greiner is an experienced and successful gardener, and he has given the world a book which is filled with practical suggestions, and one which is at the same time interesting to read. I am confident that he who calls the attention of his fellowmen to such work does them a great service. There was a time when the cultivation of the soil was considered mere drudgery, but that time has gone by, and to-day the demand is for the highest grade of intelligence in all rural pursuits. What the world wants is men and women who can do something, and do it with intelligence and dispatch.

I feel constrained to urge upon all tillers of the soil, who have under their care a family of children, the importance of placing in their hands just such books as Mr. Greiner's. Give them books to read on general agriculture, gardening, poultry, apiculture, etc., and you will soon find them entertaining advanced views of life, as they begin to realize how much agriculture, in the largest sense of the word, adds to the sum of human happiness, and how dependent the world is on the tillers of the soil. I do not wonder that work seems mere drudgery and life barren to many a farmer's children, as their surroundings offer so few opportunities for growth in knowledge. They have not been taught to think, and they have but little taste for reading, as they have never had anything but a few school-books and the almanac to read. Such children are sure to look upon manual labor of every kind as slavish toil; and, if they occasionally catch a gleam of the possibilities of a better method of living, they are almost sure to seek it in the restless activities of some great city. Many a father sees his son depart for such a life, with sadness and sorrow, as he well knows how many there are who fail, and how many more are carried down to an untimely grave, with ruined lives and blighted hopes, by the great waves of sin which surge and beat on the streets and in the secret and hidden dens of vice in every large city. You ask what is to be done to prevent this, to avert these dire calamities which come to so many? Give them employment early in life; teach them that the noblest and most honorable thing any man or woman can do is to earn a living by the sweat of their brow; make their early lives happy; give them books to read, flowers and fruits to cultivate; make their homes comfortable, pleasant and attractive. In a word, satisfy the longings of their higher natures, and they will soon learn to find enjoyment in any work which the duties of life have laid upon them.

I am aware that all of this is not about bees, nor "How to Make the Garden Pay," but it relates to the higher question how to make life pay, and he who learns this is sure to make a success of any undertaking, whether it be tilling the soil or caring for the busy little workers as they gather the golden nectar to sweeten the pathway of life.

Canadian Beedom.

Foul Brood Among Bees—Phenol Treatment.

Understanding that a fatal disease, known as foul brood, has been prevailing among bees of late years, and also that Rev. W. F. Clarke had gained some important information and experience in regard to it, the Mercury reporter sought an interview with him at his apiary in relation to the matter. The following is the substance of Mr. Clarke's remarks on the subject:

HISTORY OF THE DISEASE.

Foul brood is the most virulent disease with which bees are ever attacked. It is supposed to have existed from the

earliest times of bee-keeping, but not much has been known in regard to it until of late years. Various circumstances have led to its wide prevalence in recent times. The use of the honey-extractor, the breeding of queen-bees and the traffic in bees and their transmission by mail, express and otherwise, have been among the means of diffusing this fell disease. The vicinity of Guelph has been badly infested with foul brood, owing mainly to the establishment of an apiary of 40 colonies near Victoria Bridge. This apiary was sold to the party who started it by Mr. D. A. Jones, of Beeton, probably without his being aware that the bees were affected with the disease. At that time Mr. Jones and other dealers in bees were but little aware of the nature and prevalence of the disease. That apiary of 40 colonies became dwindled and scattered; diseased swarms went off to the woods, and the whole region around Guelph became inoculated with the disease. Even now, comparatively few understand the disease properly to diagnose it.

NATURE AND SIGNS OF THE DISEASE.

People often mistake chilled or dead brood for foul brood. When a cold change in the weather comes in early spring, and the breeding of young bees is pretty far advanced, it often happens that the nurse-bees are not able to sufficiently foster the young brood with warmth. The result is similar to that when a hen does not sufficiently cover her clutch of eggs. Some of them get chilled and become addled. In the same way patches of bee-brood become chilled and lost in a bee-hive. But this is not foul brood, which is a microbe disease, and must have either the bacillus or the germ in the hive to start it. Its culture is similar to that of such microbe diseases as diptheria. The signs of its presence are as follows: Discoloration of the larvæ indicating disease, which progresses until it ends in death, when the larvæ changes into a putrid mass, which is of a dark chocolate or coffee color. It is viscid and has a certain toughness, so that when a pin or a sliver is pushed into it it will draw out like taffy. When the disease is considerably advanced it gives forth a most offensive odor, somewhat resembling the stink of a glue-pot, only the smell is more pronounced. Like all microbe diseases, there is a tendency in these diseased germs to increase very rapidly unless checked.

REMEDIES FOR FOUL BROOD.

Various remedies have been devised for the cure of this disease. Mr. D. A. Jones discovered a fasting process. He found that when all their honey was consumed the bees made a fresh start, free of the disease, but there were difficulties in the way of this remedy which prevented it being widely adopted. A cure known as the McEvoy cure has been in most extensive use. Mr. McEvoy is Foul Brood Inspector for the Province of Ontario, and has power to enforce his remedy by law. It is no doubt an effectual cure when properly applied, but the objection to it is its costliness and the trouble involved in it.

Various drug remedies have been resorted to, and one of these, known as the Cheshire cure, has been successfully adopted by some careful experimenters. Mr. Cheshire, though not the discoverer of the cure, was the first who achieved distinguished success with it. Unfortunately he died before he was able fully to develop his process. In Volume II of his great work entitled "Bees and Bee-Keeping," he gave a full account of the bacillus and its germ or spore, and briefly detailed his method of treatment. To prove the efficacy of his cure he challenged the British Bee-Keepers' Association to produce the worst case of foul brood that could be found, and pledged himself to cure it, which he did to the satisfaction of the Association. The recipe was then published to the world. It was tried by many bee-keepers in Britain, on the Continent, in the United States, and by a few in Canada, all of whom failed to make it a success. Mr. Clarke has been experimenting with this remedy for the past three years, and believes he has hit upon the essential conditions to success. They are few and simple, and may be briefly explained as follows:

The drug is known to chemists by the name of "phenol," which is a refined preparation of carbolic acid. To succeed with this remedy it is necessary that the bees should consume a portion of it. They are tempted to do this by its being mixed with sugar syrup in certain prescribed proportions. To induce the bees to partake of it, it must be greatly attenuated and fed to them when there is no honey to be gathered. Fed in a time of scarcity of nectar, they will take it, if given one five-hundedth to one seven hundred and fiftieth, that is to say, 500 to 750 parts of sugar syrup to one part of phenol. Taken by the bees anywhere in these proportions the drug will kill both the microbe and the spore. This fact, which Mr. Clarke believes has been demonstrated, is of the greatest importance to bee-keepers.

The present is the most favorable time for trying the remedy. The bees are hungry for food, and, like a starving man who is not particular for luxuries, like quail on toast, the bees are glad to get a plain article of food. The remedy is cheap and of easy application. Mr. Clarke is anxious that bee-keepers should put this remedy to the test. It is of no use merely to place the phenolated syrup in the hive—the bees must consume it in a curative quantity. They will do this if they have no honey to gather from outside. Let it be distinctly understood that two conditions are absolutely essential to success in the use of this remedy: First, that the bees have no other resources, and second, that phenol be diluted so that the bees will accept it. This will be somewhere between the 500th and the 750th. Mr. Clarke gives this wide margin because he is not sure whether phenol is always of the same strength. Phenol may be obtained of any good druggist.

Syrup, medicated with phenol as described, is a preventive as well as a cure. Owing to this having been an exceptionally bad honey season, a great many colonies of bees will require feeding before winter, and Mr. Clarke earnestly advises all who have any feeding to do to do it with phenolated syrup. About five cents' worth of phenol is sufficient for 10 or 12 pounds of sugar syrup. It is a cheap and easy experiment for bee-keepers' to try. Bees that do not require feeding, but are suspected to be tainted with foul brood, should have a small quantity of the phenolated syrup daubed over the brood-combs and run into the cells adjacent to the brood. If this be done the bees will assimilate a curative quantity of the drug.

This is a thoroughly scientific mode of treatment. It is well known that carbolic acid is one of the most potent of antiseptics, and, as already stated, if the bees can be induced to take it, it will kill both bacillus and the spore.

It has been stated that any drug that will kill the bacillus will also kill the bee. This he has proved, over and over, to be a mistake. Phenol, given as he has directed, will kill the bacillus and spore of foul brood without hurting the bees or larvæ.—Guelph, Ont., Mercury.

"In Shipping Comb Honey," says Prof. Cook in the Rural Californian, "the shipping-crate should not hold more than 12 pounds; should have glass sides, so as to show that the contents are fragile, and should be so placed that the combs will run endwise of the car. This prevents the comb from breaking out."

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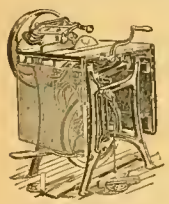

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36A4t COMPTON, Lee Co., ILL.

General Items.

Bee-Keeping in Oregon.

This is my first year with bees. I started with a few colonies, and I shall endeavor to increase them as much as the future will permit. I have only been stung once this season. I believe I am poison to them, as their sting never swells on me. Years since I used to hunt wild bees in the caves in California, principally for the ten dollars a colony I got for them, and on the large cave or seam rock near Los Angeles, I've used many pounds of powder, and from it I got countless pounds of honey, where I had to swing over the cliff by a rope, then let down 100 feet to reach them.

I know many would frown to visit some bee-keepers here. Some have as high as 150 colonies, many 20 to 50, and they nearly all use sulphur in the fall, and kill the old colonies to rob them, because they only use a one-chamber hive, with no frames, and many of them put honey, comb and all, into a barrel, and chop it up. Imagine the mess! Of course, it is not salable, and what is not consumed by the family, is usually fed to the hogs. They laugh at me when I try to tell them of other ways. Being somewhat isolated, they have to ship by vessels, and that at rare intervals, and the people being poor, I suppose has something to do with their ways of ignorance. Probably there are 800 colonies of bees in a range of five by 20 miles, and not a thousand pounds of honey shipped. From May 1 to the last of September the bees never cease to work, and are supplied with some kind of bloom by nature. There is little honey-dew here, and a failure of crop has not been known. T. E. RUSSELL.

Florence, Oreg., July 30.

Bee-Keeping in Florida.

Florida bee-keepers are "not in it" this year, nor likely to be for several years to come. The freeze last winter annihilated all orange and mangrove blossoms. I do not know of a Florida bee-keeper who is getting much surplus honey. I have 60 colonies, and there was just enough honey in March, April and May to set them to breeding and swarming, with but very little to extract. I never before saw so many swarms with so little honey. We have always depended upon keeping down the swarming-fever by extracting, but this year they would swarm long before we thought there was honey enough to extract. I have kept bees 18 years, and there were more swarms out this year than all we ever had before in the 18 years. After the 60 hives were filled I did not care to increase the number of colonies, so I cut out queen-cells, or made some nuclei for rearing queens so as to get rid of all old queens that were not pure Italians, and built up all the weak colonies. But they constantly built new queen-cells, and made things lively. I keep all queens' wings clipped, and only allowed three or four swarms to get away. When they had reared young queens that were overlooked, I remember one day two large swarms came out and

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settled together, making nearly a bushel of bees. Before I could take care of them, a strong nucleus came out, and I knew if they got together I would have hard work to find the young queens, so I threw a canvas over the two swarms just before the the nucleus settled, and easily found the queen on the top of the canvas.

We extracted only 10 pounds per colony. In our section we dare not extract any after the forepart of June.

Last year was the great honey year of Florida. We took over 30 barrels of honey. We use a one-story hive, two feet long, and holding 15 frames about 10x12½ inches, inside. We use them only for extracting, and do not care to exchange them for any other. I think bees will increase faster in a hive deeper than the Langstroth. We generally extract first one end, and then in a few days the other, so that half of the hive will always have honey.

We had two or three cases of what we called "bee-paralysis," but it all disappeared of itself, and I have seen no signs of any this year.

There were several cases of what I feared might be foul brood several years ago in our Iowa apiary. There would be a good deal of dead brood in the cells. I noticed that it was confined to colonies of very dark hybrids, and on introducing young Italian queens it all disappeared. An account of it was published in the American Bee Journal 10 or 12 years ago. I saw in the Bee Journal an account of the similar case a few weeks ago.

It will probably be several years before Florida will have much surplus honey to put on the market. GEO. W. WEBSTER.
Lake Helen, Fla., Aug. 19.

Bee-Keeping in Washington.

Perhaps some of the bee-keepers would like to hear from this section of the country. I have been keeping bees now for five years, but this is the first year of practical work. I have been keeping my bees at Port Townsend, which is on a peninsula, but the pasturage was too limited, and we had many windy days, so I moved my apiary, consisting of 30 colonies, to my present location. In the spring, during the latter part of April, and through May, bee-forage consists principally of willow, maple, fruit-bloom, and the various wild vines and bushes, some of which are the salmon berry, wild raspberry, wild huckleberry (which is red here), blackerries, and the Oregon grape, which is a little bushy plant growing about six to eight inches high, and has needle-pointed leaves.

Our main crop of honey is obtained from the white clover, with which every roadside and pasture and orchard is covered, and which grows everywhere where it can get a hold; in fact, this whole country seems to be especially adapted to its vigorous growth. The clover begins to yield from about July 1, and until about the middle of September, although this year it did not yield quite as well as usual, as the season has been very dry; and since Aug. 1 the forest fires have been raging so that some days the bees could not work very well; still I have some colonies that have swarmed, and the old colony has already stored 48 pounds of surplus—not so bad, after all. F. M. LITTLE.
Junction City, Wash., Aug. 15.

Queens and Queen-Rearing.—If you want to know how to have queens fertilized in upper stories while the old queen is still laying below; how you may *safely introduce* any queen, at any time of the year when bees can fly; all about the different races of bees; all about shipping queens, queen-cages, candy for queen-cages, etc.; all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know—send for Doolittle's "Scientific Queen-Rearning"—a book of over 170 pages, which is as interesting as a story. Here are some good offers of this book:

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Binders for this size of the American Bee Journal we can furnish for 75 cents each, postpaid; or we will club it with the Bee Journal for a year—both for $1.60. We have a few of the old size (6x9) Binders left, that we will mail for only 40 cents each, to close them out.

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

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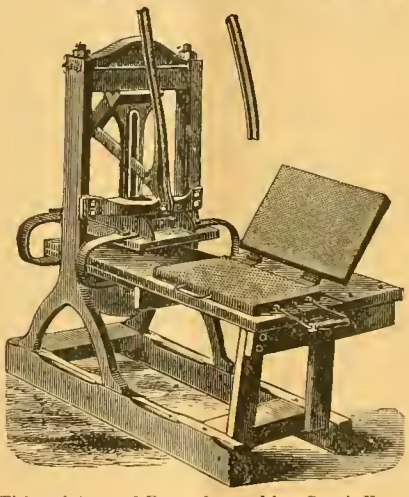

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The outfit cost over $100, and is a great bargain for any one desiring to make Foundation for personal use. I offer it for $50.00, free on board cars here.

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Honey & Beeswax Market Quotations.

CHICAGO, ILL., Aug. 25.—We are having considerable inquiry for comb honey. We have as yet received but a few small consignments. We quote: Fancy white, 15c.; No. 1 white, 14c. Extracted, 5@7c.
Beeswax, 25@27c. J. A. L.

KANSAS CITY, Mo., Aug. 20.—The receipts of new comb and extracted honey is fair, the demand not large, but will increase with cooler weather. We quote: No. 1 white comb, 1-lbs., 14@15c.; No. 2, 12@13c.; No. 1 amber, 11@12c.; No. 2, 10@11c. Extracted, white, 6@6½c.; amber, 5½@6c.; Southern, 4½@5c.
Beeswax, 22@25c. C. C. C. & Co.

PHILADELPHIA, PA., Aug. 19.—New crop of comb honey is coming in more freely and generally in good condition. Demand is now beginning to spring up. New extracted is arriving in a small way. We quote: Fancy comb, 14@15c.; good, 13c.; fair, 9@11c. Extracted, 4½@5½c. It is hard to get our market to rally after the blow it received in the spring on discovering such a large amount of beeswax adulterated. We quote pure wax, 22@25c. W. A. S.

ALBANY, N. Y., Sept. 6.—Honey market opening with good demand. Receipts lighter so far this year than last, but do not look for higher prices. We quote: White comb, 14@15c.; mixed, 13@14c.; dark, 11@12c. Extracted, white, 6½@7½c.; mixed, 6@6½c.; dark, 5½@6c. Beeswax, 28@29c. H. R. W.

CHICAGO, ILL., Sep. 4.—The new crop is coming forward and sells at 15@16c. for best lots; dark grades, 9@12c. Extracted ranges from 6@7c. for white, and 5@5½c. for colored, flavor and package making difference in price.
Beeswax, 27@28c. R. A. B. & Co.

BUFFALO, N. Y., Aug. 23.—Receipts of honey are light as yet. Comb and fancy stock would sell at 14@15c.; choice, 12@13c.; buckwheat is moving exceedingly slow and is hard to place. The indications are that early shipments will realize the best results.
Beeswax, 25@30c. B. & Co.

CINCINNATI, O., Aug. 7.—Demand is lively for new extracted and comb honey, all old honey being closed out. Arrivals are fair but insufficient for the demand. Comb honey brings 14@15c. for choice white. Extracted, 4@7c.
Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. M. & S.

CHICAGO, ILL., Aug. 23.—Fancy white comb honey (1-lbs.) in nice, clean packages sells at 16c.; other grades of white honey, 14@15c.; amber, 13@14c. We are having a good trade in extracted honey, selling light amber and white at 6@7c.; dark, 5@5½c. depending on quality and style of package. Early shipments to market advised so as to permit of sale before cold weather sets in.
Beeswax, 28c. S. T. F. & Co.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

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Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Home-Made or "Boughten" Comb Foundation.

Query 987.—1. Do you buy or make your foundation?

2. About what proportion of our apiarists do you think make their own foundation?—D.

J. M. Hambaugh—1. Buy. 2. I don't know.

Dr. J. P. H. Brown—1. I make. 2. I can't say.

B. Taylor—1. I make my foundation. 2. I do not know.

G. M. Doolittle—1. Sometimes both. 2. About one-fourth.

Eugene Secor—1. I buy it. 2. Perhaps one in a hundred.

R. L. Taylor—1. I make it. 2. At a rough guess, one in fifty.

Mrs. L. Harrison—I. Buy. 2. Not more than one in twenty.

W. G. Larrabee—1. I make it. 2. I should guess about one-tenth.

J. M. Jenkins—1. I buy. 2. Not more than one in a hundred, perhaps.

Prof. A. J. Cook—1. I buy. 2. I presume very few of the smaller ones.

Rev. M. Mahin—1. I buy it. 2. I do not personally know any that make it.

J. E. Pond—1. I buy it. 2. Possibly one in one hundred, but I don't know.

Dr. C. C. Miller—1. Buy. 2. I don't know, but I think fewer than formerly.

W. R. Graham—1. I make my own, and buy some. 2. About one out of a hundred.

E. France—1. I make it. 2. Foundation dealers can make a better gness than I can.

Jas. A. Stone—1. I have bought it so far. 2. I do not know of one in this part of Illinois that makes his own foundation.

C. H. Dibbern—1. I have a good fountion mill, and formerly made all my own, and some to sell, but I now buy all I use. 2. Very few.

P. H. Elwood—1. I make Given foundation for brood-frames, and buy Van Deusen for surplns. 2. I don't know. Probably less than a quarter.

G. W. Demaree—1. I now buy what I use. 2. I do not know—not one in twenty, I guess. When my apiary was larger than it is now, I made my own foundation, but it would uot pay me now.

J. A. Green—1. I always used to make it. I buy what I use now, as I do not have time to make it so as to have it fresh, which would be my only object in making it myself. 2. Only a small proportion—less than 5 per cent.

W. M. Barnum—1. I have always preferred buying my fonndation, as I consider that the cheaper and by far less troublesome way. 2. Only about one per cent. of the apiarists of my personal acquaintance make it themselves, and I doubt if that per cent. lasts long.

Rev. E. T. Abbott—1. I buy it, for the same reason I buy my flour—because I think a man who devotes his time and energy to manufactnring a thing of this kind, can do a better job than I can. 2. I have no means of knowing. As bee-keepers are supposed to be men of average intelligence, I should say very few make it.

H. D. Cutting—1. I have made and bought large quantities of foundation. I prefer to buy the brood, and make the thin. 2. It would be a difficnlt matter to say, bnt I think there are not as many making foundation for home use as there were a few years ago.

Mrs. J. N. Heater—1. I buy all my fonndation (from whom I think is an honest manufacturer of pure beeswax) both for my own use and for my customers. 2. I think the percentage is small. I do not know of an apiarist in this State (Nebraska) who makes his own foundation.

Allen Pringle—1. I seud the wax to a maker and have it made as ordered. 2. If yon mean "our apiarists" every man who keeps bees, I should say about a quarter of one per cent. of them make their own. If you meao simply those who nse fonndation, I should guess about 5 per cent. of them.

Non-Swarming Bees

I am rearing Queens from a strain of yellow-banded Bees that have never been known to cast a swarm! Can any other bee-keeper make such a claim? These Queens are a beautiful orange-color, very prolific, and produce handsome three-banded workers. The Bees are great honey-gatherers, very gentle, enter the sections readily, cap their honey snow-white, and winter on the summer-stands in perfect condition in any climate; and in most cases can be handled without smoke or protection of any kind. I can fill an order by return mail for 200 Queens. Safe arrival and perfect condition guaranteed; when otherwise, another Queen will be sent by return mail.

Prices—One Queen, $1.00; three Queens, $2.75; six Queens, $5.50; twelve Queens, $9. All my Queens are mailed in self-introducing cages, and directions for safe introduction with each Queen.

Testimonials Just Received.

UNION, Maine, Aug. 17, 1895.
MR. ALLEY:—I inclose $1 for a Queen like that one sent in 1894. She was a good one.
W. CARROLL.

OLYMPIA, Wash., Aug. 16, 1895.
MR. ALLEY:—The Queen you sent me last season is the best one in my apiary. Find $1 for another. H. GALLOWAY.

WOODBINE, Iowa, Aug., 1895.
MR. ALLEY:—I bought a Queen of you last year. The bees are very handsome, good workers, and have shown no signs of swarming. Send me one like her. B. L. COPELAND.

☞ Don't fail to order one of these Queens by return mail. You can test them before July, 1896. This is the best time in the year to introduce Queens. Address,

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Queens and Nuclei!

Untested Italian Queens, by return mail, 75c; Tested, $1.00; Select Tested, $1.50.
Nuclei, by express—per Frame, 75c.
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PEERLESS FEED GRINDERS

Grinds more grain to any degree of fineness than any other mill. Grinds ear-corn, oats, etc., fine enough for any purpose. Warranted not to choke. We warrant the Peerless to be
THE BEST AND CHEAPEST MILL ON EARTH.
☞ Write us at once for prices and agency. There is money in this mill. Made only by the
JOLIET STROWBRIDGE CO., JOLIET, ILL.
Jobbers and Manufacturers of Farm Machinery, Carriages, Wagons, Windmills, Bicycles, Harness, etc. Prices lowest. Quality best.
Mention the American Bee Journal. 34A26

MUTH'S HONEY EXTRACTOR
PERFECTION Cold-Blast Smokers,
Square Glass Honey Jars, Etc.
For Circulars, apply to CHAS. F. MUTH & SON.
Cor. Freeman & Central Aves., Cincinnati, O
Send 10c for Practical Hints to Bee-Keepers.

PLAYING HOG.

Our agents have been accused of gobbling up the best trade in a very hoggish way. Recently they imitated the animal in a still more realistic manner. One 176 lb. agent declared he could crawl through any wire fence where stays are not nearer than 2 1-2 ft. This statement published in our monthly paper has set others going and now bets are made and won by Page men in all parts of the country, much to the annoyance of owners of wide-mouthed fences.
PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Mention the American Bee Journal.

Convention Notices.

WEST VIRGINIA.—The Braxton County Bee Keepers' Association will meet at Sutton, W Va., Sept. 21, 1895. Everybody invited to be present. JACOB FRAME, Sec.
Sutton, W. Va.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association in Fort Scott, Kans., on Sept. 19, 1895. All are cordially invited to come and have a good time. There will be a full program.
Bronson, Kans. J. C. BALCH, Sec.

MINNESOTA.—The next meeting of the Southern Minnesota Bee-Keepers' Association will be held at Winona, Oct. 15 and 16, 1895. All members are urgently requested to attend. All bee-keepers and others interested are cordially invited. E. C. CORNWELL, Sec.
Winona, Minn.

NEBRASKA.—The Nebraska State Bee-Keepers' Association will be held in the bee and honey hall at the State Fair Grounds in Omaha, each evening of Sept. 17, 18 and 19, 1895. A specially fine program has been prepared, and all bee-keepers are urged to be present. L. D. STILSON, Sec.
York, Nebr.

WISCONSIN.—The Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting at Platteville, Wis., Oct. 8 and 9, 1895. "Come, every one." Don't get discouraged if we haven't got a crop of honey. We will have a good time at Platteville, just the same. Bring your wives and daughters with you. Many interesting subjects will be discussed. M. M. RICE, Sec.
Boscobel, Wis.

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☞ **W. M. Gerrish**, of **East Nottingham, N. H.**, is our Eastern agent. New England customers may save freight by purchasing of him.

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If you do not sell the honey? That's what we are here for. Get our high prices before selling.

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Commission Merchants,
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Have been carefully bred for producing comb honey for the past 18 years, and by a special method for producing large, long-lived, prolific Queens. Can furnish either 3 or 5 Banded stock, bred in separate yards. 3-Banded bred from my own or Imported Mother. No foul brood or paralysis. Warranted Queens, purely mated, 60 cts.; Tested, $1.00; Selected Breeders, $2.50. Discount on quantities.

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COMB FOUNDATION.

Wholesale and Retail.

Quality always the best. Price always lowest.

Working Wax into Foundation by the lb. **a Specialty.** I can make it an object for you in any quantity, but offer special inducements on straight 25 or 50 lb. lots. Or for making large lot of Wax into Foundation. I am furnishing large Dealers, and can also please you, **Beeswax taken at all times.** Write for Samples and Prices, to

GUS DITTMER, AUGUSTA, WIS.
Reference—Augusta Bank. 16Atf
WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

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Until further notice I will furnish **COMB FOUNDATION** as follows:

10 lbs. Heavy or Medium Brood Fdn.	$3.50
10 lbs. Light "	3.60
10 lbs. Thin Surplus Foundation....	4.00
10 lbs. Extra-Thin Surplus Fdn.....	4.50

No orders will be accepted at these prices from persons living east of New York State.

For BEESWAX—fair quality, delivered here, 27c. cash; 29c. in trade.

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My secret is to sell an extra-large amount, which enables me to sell at low prices. Will run this spring 350 Nuclei—have 1 home and 4 out apiaries. No Queens superior to my Strain.

☞ Send for Descriptive Catalogue and Testimonials, to

WM. A. SELSER, WYNCOTE, PA.

Abbott's Space.

In response to many inquiries I will renew my special offer for a short time only:—

Five "St. Joe" Hives, 1½-Story, cut ready to nail—no sections—for $3.50 to any one who has never had a crate of these Hives.

I sell Dadant's Foundation at their prices; pay CASH for BEESWAX, and keep a stock of

Shipping-Crates and Other Bee-Supplies.

SPECIAL PRICES the rest of the season. Write and say what you want.

EMERSON T. ABBOTT,
WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL. ST. JOSEPH, MO.

A THOUSAND TONS OF COMB HONEY

Will be made on the Foundation sold by us this year. That is why

WE NEED BEESWAX.

Now is the time to order your Foundation for 1896. Although the

PRICES ARE REDUCED

on both Beeswax and Foundation for the balance of the season, we want all

The Beeswax You Have to Offer.

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Mention the American Bee Journal. **HAMILTON, Hancock Co., ILL.**

QUEENS!

Now ready by return mail, reared in full colonies from the best honey-gathering strains in America, at the following very low prices:

Tested.....each	$1.50
" per ½ dozen.....	8.00
Warranted purely-mated.....each	.75
" per ½ dozen.....	4.25
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If you want **Queens for business,** get my old reliable strain. 40-p. descriptive Catalog Free. **W. W. CARY, Colrain, Mass.**
27Atf *Mention the American Bee Journal.*

3-Frame Nucleus and Italian Queen —$2.50.—

Untested Queens, 75c.; Six for $3.50.
Discount on Quantities.

FULL—LINE—OF—SUPPLIES.

I. J. STRINGHAM,
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Has No Sag In Brood-Frames

Thin Flat-Bottom Foundation

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Being the cleanest is usually worked the quickest of any Foundation made

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook Montgomery Co., N. Y.
Mention the American Bee Journal.

Select Tested Italian Queens

Friends, I will have 200 Select Tested Queens for sale Sept. 1, at $1.00 each or $10.00 per dozen. Untested, 50 cents each, or $5.00 per dozen. Tested Queens 75 cents each, or $6.00 per dozen, either Golden Italians or Imported stock at same price. Safe arrival and satisfaction guaranteed. Address.

F. A. CROWELL,
31Atf GRANGER, MINN.

IT TELLS ITS OWN STORY!

We are receiving hundreds of **Testimonials** speaking of the **High Quality** of the goods that are turned out by us; but we have space for and reproduce on the advertising pages of the various bee-periodicals only a very few. In addition to the one already given recently, here is one that tells its own story:

THE A. I. ROOT CO.:—I must compliment you on the degree of perfection to which you have attained in the manufacture of bee-supplies. I have been, as you may know, in the bee-business for about 20 years; and during that time I have obtained my supplies from many manufacturers, north and south, but have not found any that would compare favorably with the goods made and sold by you, either in quality of material used or in workmanship, so I have settled back permanently on the A. I. Root Co. as my base of supplies.

Eddy, N. Mex. J. SINGLETON.

We are making preparations to nearly double our capacity for turning out goods; and do you wonder at it after reading such letters as the above? Send to the A. I. Root Co. for large, illustrated catalog.

N. B.—**SHIPPING PACKAGES** for both comb and extracted honey on hand ready for prompt shipment.

Mention the American Bee Journal. **The A. I. ROOT CO., Medina, O.**

PUBLISHED EVERY WEEK AT $1.00 PER ANNUM.

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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS

35th Year. CHICAGO, ILL., SEPT. 19, 1895. No. 38.

Report of the Proceedings

OF THE

Twenty-Sixth Annual Convention

OF THE

North American Bee-Keepers' Association,

HELD AT

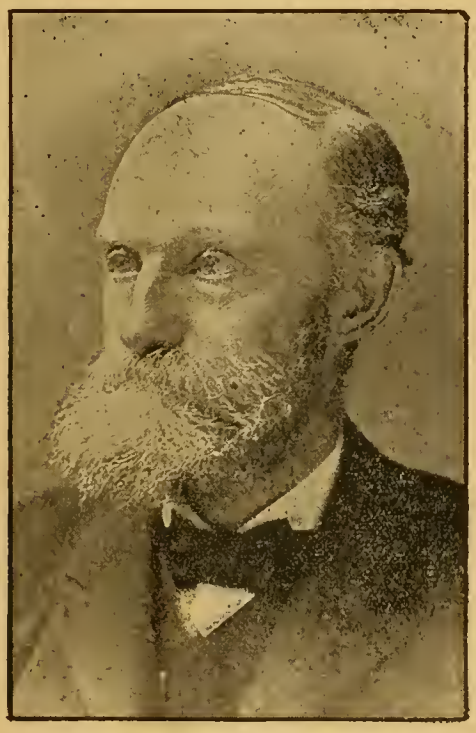
TORONTO, Ont., Sept. 4, 5 and 6, 1895.

W. Z. HUTCHINSON, SEC.

The convention was called to order at 8 p.m., Sept. 4, 1895, with Pres. Holtermann in the chair. The meeting was then opened with prayer by Geo. W. York.

The reading of the minutes of the last meeting was called for, but the Secretary explained that it was impossible, as no report of the proceedings had been published.

Mr. York—It has not been published because ex-Secretary Benton failed to send in the report. Perhaps it would be well



President A. I. Root, Medina, Ohio.

to decide now as to what shall be done in the future. So far as this year is concerned, I will make a report in pamphlet form, and give to each member a copy free of charge. If you wish a report of last year's proceedings published with it in the same pamphlet, I will furnish it if I am paid for re-setting that part of the report that has already been printed in the American Bee Journal. Of course, I must also be paid the $20 that was voted to me last year for printing the report. This is with the understanding, of course, that the balance of the report can be secured from Mr. Benton.

The proposition to furnish this year's report free of charge was accepted, but it was thought best to defer action in regard to last year's report until Mr. Benton had been heard.

An Auditing Committee was then appointed by the Presi-

Vice-President Wm. McEvoy, Woodburn, Ont.

dent, consisting of Wm. Couse, of Streetsville, Ont., D. W. Heise, of Bethesda, Ont., and Geo. W. York, of Chicago, Ill.

Report of the Freight Committee.

The committee appointed last year at St. Joseph, to see what could be done in securing a better classification of freight rates, reported as follows:

MR. PRESIDENT:—It is perhaps unnecessary that I should make any report for the committee appointed at the St. Joseph meeting, consisting of Messrs. Dadant, Whitcomb and myself, to try to secure more favorable rates on some of the things that the railroads carry for bee-keepers. The result of our efforts has already been given in the bee-journals. But that there may be no semblance of discourtesy to the Association that appointed us, I herewith present a brief report.

A full consultation was very pleasantly conducted through the mail by the members of the committee, and we had no difficulty in agreeing upon the items upon which we desired lower rates from the railroads, and I must here confess that in this regard I was the most ignorant one of the committee, and depended largely on information from the other members, and especially from my friend J. T. Calvert.

The Western Classification Committee kindly permitted

appearance in person at one of their full meetings, and I take pleasure in acknowledging the assistance at this meeting, of Mr. H. F. Moore, the attorney of the A. I. Root Co., also of Messrs. Burnett, Newman and York. The railroad men listened patiently to explanations given as to the character of the goods on which reduced rates were desired, and showed interest in seeing the goods themselves, for we had present samples of nearly all the articles on which we asked reduction in freight rates.

Without going into full details, I may say that a good share of the favors asked in the way of reduction were not

Secretary Dr. A. B. Mason, Auburndale, Ohio.

granted, but we got enough to be thankful for. Freight on honey-box lumber is reduced to regular lumber rates. Comb honey in glass is now half the former rate, which was double first-class. Extracted honey in barrels, kegs or tin cans, boxed, was formerly 2nd and 3rd class; it is now reduced to 4th class, the same as syrups. Bee-hives in the flat have been reduced to lumber rates.

Hoping that the success of the committee may not have fallen too far below the expectations of the members of the Association, the above report is respectfully submitted.

C. C. MILLER, *Chairman Freight Committee.*

Upon motion of J. B. Hall, the report was accepted, and the committee given a hearty vote of thanks.

Next came an essay by James Heddon, of Dowagiac, Mich., on the

Best Size for Brood-Chamber.

I think it my duty to avoid reiterating the many wise and otherwise statements of my brother bee-keepers that have appeared on this subject in our numerous bee-journals, during the last two years of radical discussion of the question. You all remember the logical arguments and deductions that have been made on both sides. One successful honey-producer would plead for large brood-chambers, and then proved beyond controversy that a large brood-nest was an absolute necessity at a certain time of the year, if the best results were to be attained. His argument was never answered, nor never could be, but the attempt was made to controvert his claim that large brood-chambers were best, by showing that at another time of year a small brood-chamber was likewise a necessity to best results. This last proposition was as clearly proved as the first, and I am pleased to enjoy the great pleasure of saying that, in my judgment, both are right, and yet either is wrong when he claims that the other is wholly wrong.

Is it not plain to be seen that each one of the contestants is right in most of his claims, and for that reason the controversy seems no nearer to an end than when it began? I am sure that every thoughtful honey-producer is forced to the conclusion that to attain best results a brood-chamber must be elastic. It must be so constructed that it can be readily and practically made to embrace the radical advantages rightly claimed by both the large and small brood-chamber adherents. It was the dawning of the knowledge of this truth that caused Father Langstroth and other early inventors to suggest division-boards; and two prominent reasons why these contractors never were universally adopted, was, first, because many bee-keepers are neglectful, and, second, the practical honey-producers who were not, abhor complication and tedious manipulation. Although experience proved that the advantages of changing brood-chamber capacity at various times of year, cost about all it came to, yet the fact that such capacity must be changed, if we are to realize the most from our bees, still remains. I think it would be bordering upon assumption, for me to rehash what has already been so well said upon this subject in our bee-journals during the last two years.

I believe that locality, or necessity, makes a difference with regard to the best size for the brood-chamber, upon the same principle that conditions changing with the seasons change their adaptability; but I do not believe that locality makes as much difference as some have contended, nor as much as a change of seasons, and conditions in the same honey-field.

When, with the rest, I thought I must be contented with the use of a brood-chamber, the capacity of which remained the same throughout the year, I settled upon eight Langstroth frames as best, as splitting the difference between being too large at one time, and too small at another. I have never changed that conclusion. I will admit, however, that some other size might average best in other localities. I cannot conceive of any sound argument in opposition to the almost self-evident statements herein made; nor do I believe there are many, if any, practical honey-producers present who would care to take an opposite position; but if I am in error in this, I trust that I have said just enough to lead to an interesting discussion of the topic, and yet I cannot think what will be said that has not previously been said in our late literature.

JAMES HEDDON.

A short discussion then followed on Mr. Heddon's subject:

S. T. Pettit—If I were to adopt the Langstroth frame, I would have neither 8 nor 10 frames, but 9. I think that is just about the right size.

J. B. Hall—A small hive may answer for the home apiary, but for the out-apiary a larger hive is needed, if the owner is

Treasurer W. Z. Hutchinson, Flint, Mich.

to be able to get away long to see his girl, or to help his wife take care of the babies, if he has a wife and babies.

Wm. McEvoy—I suppose that 2,000 cubic inches is about the right size for a brood-nest.

A. E. Hoshal—A hive so large that it will, at the close of a July honey harvest, contain sufficient stores for winter, is not the right size to get the best results in surplus honey, I feed my bees every fall to get a large brood-nest filled with brood, well and good; but we don't want it if it is to be filled largely with honey during the honey harvest.

Mr. Hall—I have hived swarms the 13th of June, and taken off 225 pounds of surplus, and yet there would be enough honey in the brood-nest for winter. It isn't the cost; it isn't the work; it isn't any of these things that makes objectionable the feeding of sugar for winter stores, but it is the suspicion that attaches to our product if sugar is fed.

A. E. Hoshal—I don't try to conceal the fact that I feed sugar for winter stores. I tell everybody; and Mr. Hall can't come down and sell honey under my nose, unless he sells it cheaper than I do.

(Continued on page 613.)

Contributed Articles.

On Important Apiarian Subjects.

A House for Fumigating Combs.

BY DR. E. GALLUP.

I now will endeavor to tell how I would build a fumigating house.

Make a light frame of 2x3 scantling for posts, about 6 feet high, and just the right width one way to hold three or four lengths of combs, according to the amount we would be likely to have. Cover the frame with building-paper, so as to have it tight. Perhaps tarred paper would be best, if it would not scent the combs to injure them. Let the paper go over the roof and all. Outside of the paper any kind of boards will answer. Either shingles, shakes, or board will answer for roof. (A Californian will understand what "shakes" are). Four feet and 9 inches will be wide enough inside of the posts, to hold three 18-inch long combs or frames, and strips to hang them on. Then you can make the building 5 feet the other way.

Nail one strip at each end, one inch by two, near enough to the top of the building to hang the first tier of combs on. Now you want four strips to go lengthwise of the building. The two outside ones can be nailed to inside of the posts, and the center ones loose, so they can be taken down when not in use. Now you have a place for the first tier of combs.

The strips to hang combs on will be strong enough if they are 1 inch by 1½, I think. Hang the next tier just below the first, and so on until you have the house full. You want a narrow door at the end, and low enough to open below the top tier of combs, or you can open it outside. All after the top tier wants to be shorter, so you can have room to stand inside, or you can leave out the center tier of combs, just whichever way suits, or a part of it can be left out.

Now you want a short trench extending from the inside of the building out three or four feet, and covered with a strip of sheet-iron, with a trap-door at the outer end of the ditch or trench to put in the burning sulphur. I like the sulphured rags the best. If you put fire directly under the combs inside the house, you might have the whole cremated before you were aware of it.

Now the whole is fixed to suit me, and with a quantity of rags always on hand saturated with melted sulphur and kept perfectly dry, one can light some of the rags with a match at any time, and fumigate the combs as often as required, by placing the lighted rags in the trench and closing the trap-door. You now understand the theory, and one can even fumigate a few combs in an old dry-goods box, or a cloth tent.

It may be interesting to know that we fumigate large orange trees, 20 feet high, under a cloth tent. The cloth is painted black, and they fumigate at night to kill the different kinds of scale that infest the trees. They use such strong ingredients that it kills all the young and tender growth of the trees if they fumigate in the daytime, and allow the hot sun to shine on the trees at once. Two men manage several tents at once, by having them properly arranged with light poles, ropes, pulleys, etc. Before they discovered this method of killing the scale, whole orange and lemon orchards were entirely destroyed, and others badly injured.

Now if any one has a better method than the above to preserve combs from the moth, trot it out. In hanging up the combs they must not be hung so close together as to touch each other. Fumigating will not destroy the miller's eggs, so if there should be eggs at the time of fumigating, it would be well to fumigate the second time in a few days after the first fumigation.

DON'T BE TOO SURE.

Mr. McEvoy, on page 510, says he would have to travel over a line that no man ever took before. I have never seen a case of foul brood; I took the trouble years ago to go 30 miles on purpose to see a reported case of foul brood, but found the case starvation. About that time I was asked for my opinion of foul brood, in the old American Bee Journal; Mr. Wagner was then editor, and I went over the same line as Mr. McEvoy described, and it was published by Mr. Wagner, though perhaps not in so minute detail as Mr. McEvoy's.

Santa Ana, Calif.

What Dr. Miller Thinks.

FLAGSTONES FOR UNDERGROUND BEE-CELLARS.—On page 566, in his excellent article about caves or bee-cellars, Friend Doolittle advises for roofing to be covered with earth, flagstones in place of wood. I suspect there may be a difference in flagstones, but I think I'd rather use plank than such flagstones as we have in Marengo. I covered a cistern with flagstone, and it seemed to become rotten, and flaked off with dampness.

GETTING OUT WAX WITH STEAM.—I have read in Gleanings about getting wax out of old combs with steam, but it always seemed to me an aggravation to be told of such a thing when we had no apparatus such as they have at Medina. I never thought of such a thing as going to the water-works or other place where steam power was used. John Clark solves the problem nicely on page 568. Thanks, John.

GOOD ADVICE.—I wish all beginners would heed the excellent advice of Wilder Grahame, on page 568. Get a good bee-book and study it *thoroughly*, then what you read in the bee-journals will be worth double as much, and you'll not be groping in the dark. You'll probably have as many questions as ever to ask, but you'll get more good out of the answers. If you can't afford both, stop your subscription to your bee-journal for a year and buy the text-book. Then study it. [See book offers on page 611.—EDITOR.]

BUCKWHEAT SWARMS.—Bees do not often swarm after the white honey harvest. Sometimes, however, they do, and I suppose for the same reasons that they swarm earlier in the season. Such late swarms are usually called "buckwheat swarms," and that's the kind of swarm Geo. McCulloch had, as mentioned on page 569.

CLIPPING QUEENS' WINGS.—"The point made is that clipping deprives queens of the power of flight, and that organs not used are likely to deteriorate." See page 569, first paragraph. I did admit, and do admit, my Canadian friend, the two points you make, but I don't see the close connection between them that you seem to think you see. If it were true that clipping deprives queens of much flight that they would make if unclipped, then it might be worth while to talk about deterioration. On page 519, I referred to cases in which the queen never flies after her wedding-flight. Now will you kindly answer this question: If a queen is clipped, and lives two or three years thereafter, is there any more deterioration than if she lived those two or three years with whole wings, and never during that time made the attempt to fly?

If you are correct in your views, the matter is a very important one, and it is only fair that it have very serious consideration. I think we are agreed that disuse, as a rule, causes deterioration. I doubt whether the rule can be rigidly applied in the case of queens. No matter, admit that it does, and I take the ground that clipping does not cause disuse—at least, that it has very little effect in that direction. With a queen in a colony that never swarms, of course it can have no effect whatever. The Dadants have not more than three to five colonies swarm out of 100. It is probably safe, then, to say that 40 out of every 100 of their queens never fly after the wedding flight. Do you think there is any deterioration with that 40? Or, to put a question more directly to the point, do you think it can make any possible difference with that 40 whether they are clipped or not?

But take the case of bees that swarm regularly every year. How much disuse is caused in their case by clipping? or, in other words, how much flight do they lose by clipping? At the time of fecundation the young queen makes several flights, circles about and marks the location, her flights lasting perhaps from three to 15 minutes. In all, she probably flies several miles before commencing to lay. Then she is clipped, and loses the flights she would make in swarming the two following years. How much does that amount to? She flies to a point perhaps five rods distant from her hive each

time. Of course, she flies more than the five rods, for she circles about and hovers in the air, but I suspect it is making full allowance to say that the average unclipped queen does not fly after she commences to lay, more than one-tenth as much as she does before commencing to lay.

If clipping queens' wings has any effect in reducing the power of flight in her progeny, it is important we should know it, but as yet I see little proof. Marengo, Ill.

A Different Management of Bees Needed.

BY JAMES CORMAC.

Now that the season has passed—the period when the hoped-for surplus is secured—we are left to reflect what might have been had a different procedure obtained with regard to our manipulations during the season of section honey expectations, for, the language of one eminent author, "Expectation now stands on stilts," is as expressive of the feelings of the average apiarist during the advance of summer, as upon the occasion to which the quotation applied.

In reviewing our efforts to secure a surplus of section honey, when we were warned of the probable failure of clover to produce much nectar, and to those favorably situated to avail themselves of the basswood yield, can you charge yourselves with any fault wherein you have not secured the almost entire quantity obtained by your bees, and had it deposited in the sections?

It is well for one to take a retrospective view of his efforts to accomplish any given object he has had in view, more especially when a failure has occurred than when he feels himself amply rewarded, as failure is more apt to stimulate one to study cause and effect, especially when one knows he is not master of all the environments.

Experts, or those of large experience in apiculture, have given directions as to the course of procedure to obtain the best results, and all interested have given them credit for the great progress having been made in recent years by all those following their prescribed methods, yet those methods are various. Some contend that success depends upon a certain form and size of hive, to insure the best results; others claim that the hive does not in itself warrant their conclusions, but a certain course of management of the colony, or the swarm, must obtain if much surplus is to be expected; and in accordance with the instructions, most apiarists have concluded to adopt the practice set forth by these brighter lights of the apicultural fraternity. My reading of the general custom now practiced in case of a swarm is to hive it in a hive to occupy the place of the colony from which it came, removing at once, or in a short time, the mother colony to a different stand, thus securing all the field-bees with the swarm, and strengthening the working force to the utmost. Thus, after careful management during the early part of the season to increase the strength or number of bees, if a swarm comes out it may be as strong as to the number of bees as can possibly be brought about, and different methods are practiced to accomplish this, all of which are familiar to those who read our excellent journals, and one procedure or the other is doubtless practiced.

But, at the same time, all admit that if swarming could be prevented entirely, much more honey could be obtained from a given number of colonies, and much has been written, and many have reasoned themselves to conclude that we can effect a non-swarming condition. Should each live to the age ascribed to Methuselah, perhaps somewhat of this condition might be brought about; but as our object is for more immediate returns, and swarming has been practiced by bees from Methuselah up to date, it seems a considerable undertaking, considering the average length of life in the present age.

Swarming seems to be a stimulative incident in the life and habits of the bees, and ought to be encouraged. Clipping the queen's wings gives one control over the swarm to such an extent that perfect—yes, perfect—control of the swarm is obtained. If so, why should one deprecate swarming whilst we have it in our power to continue the normal condition of the colony instead of taking the non-usual practice of placing it in an abnormal condition?

Some claim that we sacrifice from 10 to 20 pounds of honey to every pound of comb constructed by the bees. If such be the case, why waste your expected surplus in such a course of procedure, as to cause you that great loss? For if your sections were built full of comb, a great part of this loss would be obviated. I do not attempt to claim that sections can be built full to receive the honey as gathered, because some bees gather and store almost from the base, as building goes forward. In a flow of nectar like that obtained from linden or basswood, being of short duration, the efforts of the bees must be conserved to the greatest possible extent, and the present methods do not seem well calculated to insure this saving of waste, which is forced upon the colony by our present methods of management of swarms. Therefore, this idea of educating the bees, or changing a vital law of their being, has forced itself upon the thoughts of many. Experimentation upon various matters, to the more successful management to accomplish a saving in honey-production, is now, and has been, a careful study of late years. The fact of a constant decline in the amount to be obtained, because of various causes not within the control of the apiarist, ought to inspire earnest thought, whether it is possible to continue year after year depending upon the sugar-barrel to support a large apiary, when a change in management promises to advert such a course of procedure.

Many of us are so situated that we can alleviate this condition, to a considerable extent, without much loss. Those having fields of their own can take advantage of adverse conditions by seeding ground to honey-producing plants, which will produce crops of forage and hay nearly equal in value to those now produced, and the added honey obtained from them by the bees will often more than balance any loss otherwise. That a course of manipulation can be practiced I believe can be fully and successfully argued in a common-sense light. From my view, the consideration of this matter should receive the fullest discussion, as it seems to be the one question pertinent. Des Moines, Iowa.

Crimson Clover for Forage and Honey.

BY L. STAPLES.

Crimson clover is an annual, and should be sown in August, September and October. It germinates very quickly, grows very rapidly through the fall and winter, and blossoms about May 1 in this latitude. This clover can be sown after

Crimson Clover—Roots and Blossoms.

other crops have been removed from the ground, and this way it will be of inestimable value in holding valuable nitrates in the soil that are otherwise washed out of the bare ground. It furnishes fall, winter, and early spring pasture, and enriches and stores up plant food for the next crop.

A field of crimson clover in bloom is strikingly beautiful; its marvelous beauty surpasses anything ever seen in a field crop. It is good for hay, will yield from two to three tons per acre, and from six to ten bushels of seed. About eight bushels of seed is an average yield. The plant seems to flourish and do well in all soils, in a heavy clay as well as a light sand.

Crimson clover makes good bee-pasture, and as a honey-plant it is not excelled. Every bee-keeper will sow a field of crimson clover as soon as he understands its value as a honey-plant. The seed being cheap, I predict, when farmers see

what this clover will do for them, they will scatter the seed on all vacant ground.

Ten and twelve quarts are usually sown on an acre. The ground should be prepared by plowing or cultivating shallow; pulverize the surface, and cover the seed very lightly. Crimson clover is very hardy, and will succeed anywhere where red clover and wheat does. I think where failures are made with this plant, it is caused by sowing imported seed. Always, if possible, obtain American grown seed, acclimated to this country, and a hay and seed crop is assured. No other clover remains green all through the winter. No other plant furnishes winter pasture like crimson clover.

I would like to have every reader of the American Bee Journal give this plant a trial, and will renew my offer made on page 561, to send a sample packet by mail for a couple of stamps for postage. Grand Rapids, Mich., Sept 6.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Preparing Bees for Winter.

I have read the answers to my questions on page 554. Now about the 3rd question: You say the packing might do some good. Of course, that leaves them a free entrance. It may be I do not understand this fully the way you mean. Do you mean the entrance is too large? I can pack them all around. I remember reading about a good-sized entrance for winter, or even all the year around. If too large, I can easily plug it up a little. Also, with the ones out in the yard, how would a rim do under each hive? E. B. K.

ANSWER.—A rim under a hive in winter to leave a space of two or three inches under the combs is a good thing, no matter where the bees are wintered.

The entrance to the hive should be much the same in the shed and in the old house, mentioned on page 554. All that's needed is a channel or passage from the hive to the open air, free from any danger of clogging. Perhaps three inches wide and an inch high would be good. Let it be attached firmly to the hive, so that there is no danger of its being displaced by the packing. One way is to make the box for the passageway, open at each end, then where it joins on to the hive nail on the top of your little box a piece one-half inch or so square, and nail this piece to the hive.

Queen Terms Explained.

What is the meaning of "tested," "extra choice tested," "breeder," and "extra choice breeder," when referring to queens? I notice queen advertisers use such terms.

M. S. L.

ANSWERS.—A tested queen is one which has been kept until her worker progeny has hatched out in sufficient number to show that her workers will all have the characteristic markings of the pure race. "Breeder" (perhaps a useless term) means, I suppose, when applied to queens, one which is a little better than common, so as to be a good one to breed from. The other terms have their usual signification.

Will a Queenless Colony Steal Eggs to Rear a Queen?

Last spring, after my bees had been out of the cellar about a week, I examined them to see if any were queenless, and found one without brood or eggs, and with new queen-cells started. As it was a large colony, I sent off to get a queen to save them. Owing to some delay, two weeks elapsed before the queen arrived, and on opening the hive I found laying workers had been there, as there was scattering brood with rounded cells. I introduced the queen with a good deal of doubt about her being accepted. About a week after, I examined and found she was gone, but there was still plenty of laying-worker brood. I closed the hive, and as bees were getting little or no honey at that time, I was indifferent about uniting them with another colony.

Perhaps six or eight weeks afterward I opened the hive to see if the moths were doing much damage to the combs, when I was surprised to find on the first comb I lifted out, a large, well-developed queen-cell, open at the bottom, and a patch of nice worker-brood on this comb, and on two others besides. My first thought was, that the Italian queen had perhaps deposited some eggs before being destroyed, with which they reared the queen, but since the brood has hatched I find they are all black bees like the rest in my yard. D. H.

Warsaw, N. Y.

ANSWER.—I don't know the answer to your puzzle. Some have claimed that bees sometimes steal eggs from other hives, but even if that were sometimes done, it would be less likely in your case, for the bees had plenty of eggs, and were so well satisfied with those eggs that they didn't want a queen that would lay better ones. The queen-cell may never have contained anything but what came from laying workers, and it is among the possibilities that a virgin queen flew into the hive from some other hive. A *young* virgin queen will be received where a laying queen would be rejected, and during the swarming season it is nothing remarkable for such young queens to be driven out of their own hives, glad to find refuge anywhere. But I don't know for sure whether that's the right answer.

Three-Banded and Leather-Colored Queens.

1. What difference is there between a 3-banded and a leather-colored Italian queen?

2. Are 3-banded queens imported Italians, or American-bred like the 5-banded? Are not the bands of the 3-banded bees a richer and brighter yellow? Are not the imported darker, or gray-banded? J. R.

ANSWERS.—1. "Three-banded," if applied to a queen at all, I suppose means a queen that produces 3-banded workers, a 3-banded worker being one having the first three rings of its abdomen yellow. A leather-colored queen is one whose color is a rich brownish yellow, much the color of leather. The workers of leather-colored queens are 3-banded, so if the term "3-banded" be applied to queens we may say that leather-colored queens are 3-banded.

2. Three-banded workers are the offspring of imported or American-bred queens. Imported Italian queens vary from yellow to nearly black, but their worker progeny show three bright yellow bands, no matter how dark the queens may be. Some American-bred queens are lighter than any of the imported, and some of them produce workers with more than three yellow bands.

Doubling Colonies—Dequeening.

1. Authors of bee-books, as a rule, lay much stress upon the advantages to be gained from "doubling." What is *your* opinion? Can one expect to get more surplus from two *fairly* strong colonies united, or "doubled," than if worked separately? Does increase of the population of a hive seem to impart more energy—more "vim"—to every individual member of the community?

2. Is "doubling" much practiced by "old hands?" Or is it an obsolete, old fad, like spreading brood and sundry other doings once deemed so essential to successful honey-producing?

3. I want to "dequeen" at the commencement of the honey-flow. How would it be if I were to take all brood-comb out of the brood-chamber of a strong colony—or two colonies "doubled"—substituting frames having only starters—save one frame, and that with honey, and on which I would cage the queen, but allowing workers to have access to her, say by making the cage of excluder-zinc? What I really want to know is, would the bees go to work on the starters, completing the combs in the brood-chamber (and, of course, depositing honey in them) in preference to starting work in the sections? I don't *want* honey down below, but all in the sections. Now, if I start them with *combs of brood* down below, as soon as said brood hatches out, in will go honey. Will giving ½-inch starters, as above suggested, avoid this, and secure everything in the sections? We youngsters would like to have some instructions afforded us on this matter of securing large crops by dequeening. Cannot Hon. R. L. Taylor be asked to supply it (as the result of thorough experimentation), and tell us whether or not the practice is to be recommended?

4. How would this work? Have no brood-chamber at all! Smoke the bees up into the sections, and take the brood-chamber away altogether, having the queen caged in a section—excluding-zinc on either side, honey-comb in the middle. I fail to see the requirement of a brood-chamber when dequeen-

ng is resorted to. No difficulty then in getting the bees to work in the supers, for they'd have *nowhere else to work!* Or must they have room to cluster, and that around the queen? But bees are *always* at work, day and night, in a good honey-flow, are they not? They get on with the comb-building, don't they, o'nights, and have no time to lazy around or cluster?

5. At what rate would diminution of the colony be likely to take place by dequeening? Fifty per cent. in a month, think you—or more?

6. There are several *allusions* to dequeening (just enough to make one's mouth water for more decided information on the subject) in the American Bee Journal, but they really teach us nothing. Refer, for instance, to the Bee Journal for Jan. 31, 1895, page 78 (last article on page); March 7, 1895, page 153 (first column, Mr. Theilmann); April 25, 1895, page 272 (middle column, second paragraph); July 6, 1893, page 19 (left hand column).

7. Can I unite two colonies by putting one on the other for 24 hours with simply a sheet of say newspaper between them? Must I first puncture it? S. A. D.

ANSWERS.—1. I had a good deal of faith in doubling, but did not find upon trial the results I anticipated. I could see no added vim, and would hardly advise the doubling of fairly strong colonies. Uniting weak colonies is a thing altogether different.

2. I am inclined to the opinion that few practice doubling, except with weak colonies.

3. I don't believe you'll like the plan at all. You might like the plan of an empty brood-chamber with a free queen, for that would be much the same as a natural swarm, but with the queen caged it would be too much like a queenless colony, and you would find a disinclination to building comb either in the brood-nest or sections. Whatever they should do in the way of filling up combs with honey would be in the brood-nest in preference to the sections, but if the queen is free she will crowd at least some of the storing into the sections, so as to save room for her to lay. With a good laying queen such a state of affairs as you picture should not exist, for as soon as a young bee emerges from a cell the queen ought to be ready to put an egg in it. A queen of little vigor will, however, be crowded out to a good extent. I should be glad if Experimenter Taylor would give us all the light he can.

4. I hardly know whether you mean that question in fun or earnest. It might do still better to turn the queen loose among the sections, in which case there would be more brood but less pollen in the sections.

5. The diminution might not be 50 per cent. during the first month, but it might be a good deal more later, for during the first three weeks there would be as many bees hatching out as if the queen were free.

6. Among the items you quote, you will see that the one on page 272 contemplates the dissolution of the colony. To give a direct answer to your question, I do not double strong colonies, because upon trial I found no gain by it, but rather a loss; and I do not dequeen, because, after a large experience in that line, I found the loss overbalanced the gain. I don't say your experience will be the same as mine, but my advice would be not to try it on so large a scale as I did until you first succeed on a smaller scale.

7. Better puncture the paper. They might be some time in starting a hole, but once started they'll enlarge it fast enough.

Bees Mixing Different Honeys.

Do bees mix different kinds of honey, or honey gathered from different kinds of flowers?

Here is a *fact* bearing on the question: Two weeks ago I put supers on two strong colonies. At that time the bees were very busy, and gathering honey rapidly from epilobium. They had also just fairly begun on golden-rod.

To-day I removed the supers, and found one of them filled with white epilobium honey, and the other with straw-colored golden-rod. There was no mixture of the two kinds in either super. This singular fact suggests the question asked above. And upon reflection, I do not remember ever having seen what was unquestionably mixed honey. D. C. L.

ANSWER.—I'm sorry to say I've seen only too many cases in which bees had mixed light and dark honey. A section would have its upper and central part with beautiful, clear honey, the outside cells filled with very dark honey, the intermediate cells shading from light to dark, showing that the two kinds of honey were put in the same cell. Different kinds of pollen are also packed in the same cell.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Ripening Honey.—"Many bee-keepers have gone to considerable trouble to provide solar evaporating-tanks and other means to ripen their honey, and while it may be necessary in certain localities, and with some kinds of honey, the average bee-keeper will find that if he will provide plenty of combs the bees will ripen and seal the honey under the cheapest and best possible conditions, and if extracted and run into vessels that can be covered tightly so that it cannot absorb moisture from the atmosphere, it will retain the flavor and aroma that is so highly prized in comb honey. Honey procured under these conditions will create a market for itself, if properly put up and brought to the notice of the consumer."—From an essay read at the convention of the Ontario Bee-Keepers' Association.

Here is the entire secret of success in the production of extracted honey, put in a few words. I have long felt that all artificial methods of ripening extracted honey secured quantity at the sacrifice of quality. In my opinion this is a mistake. If we want the use of liquid honey to become a matter of daily occurrence in the majority of homes in the land, we must see to it that all such honey put on the market for family use is of the very best quality. I have sometimes thought that the mere mention of artificial methods for ripening honey resulted in an injury, for, while some with long experience, who have at their command first-class facilities for doing this work, may be fairly successful, there are multitudes of small bee-keepers all over the land who have a mania for trying all sorts of new things, who are sure to fail, and the result is that a lot of poorly-ripened honey is put upon the market.

While I am on this subject, I want to say that it is my candid opinion that experimenting with "new traps" by beginners does as much to injure the honey-business as any other one thing. During the summer there is hardly a day goes by but some one with a few colonies of bees asks me if he does not need a "self-hiver," a "swarm-catcher," or something of that kind. I invariably tell him *no*; that all he needs is the bees, some good hive, sections for the supers, a smoker, a veil for the face, and a screw-driver: that he may need some other things later, but there is no use to be in a hurry about it. Of course it is well for such to have *one* good bee-book, and take *one* good bee-paper, but I am sure they do not need two of either, as that would only confuse matters.

There are one or two other points in this quotation to which I wish to call attention before I leave it. "So it can be covered tightly and not absorb moisture from the atmosphere," is a very important point. I would add, put it in a warm room where there is the least possible chance for moisture, and no chance for bad odors to taint it. I am quite sure that a large amount of honey is practically spoiled for table use after it is taken from the hives. It would seem that after all that has been said about honey absorbing moisture, tainting from bad odors, etc., all people who have anything to do with honey would have learned how to take proper care of it. They have not, however, for only a few days ago a man who has had a good deal of experience with honey took me into a large, damp cellar to look at some fine alfalfa comb honey which he had just purchased. It was lucky for him that he asked me to examine it, for, if he had not, it would have been left in the cellar until it was used up, and the result would have been very disastrous to the owner.

"Honey created under these conditions will create a market for itself," seems like another truism, yet many do not seem to be aware of this fact. I have said, time and again, that what this age needs is first-class goods, and I expect to go on repeating this saying in one form or another as long as I write for any paper. If the reader of this article does not realize how hard it is to purchase strictly first-class goods in any large city market, let him go out and try it. Goods look well on top, but seldom continue so all the way through. The apples are either small or rotten as soon as you leave the top, and the further down you go the poorer they seem to get. This is true of potatoes, tomatoes, or anything which is sold by the box or measure. The butter is rancid, poorly made, cream too old, or something of the kind. The eggs are stale, if not rotten, and sometimes one buys both eggs and chickens. I asked a friend to bring me some eggs to put down for winter, saying I would pay him more for strictly fresh eggs. The first five dozen had nine eggs among them just ready to hatch.

No; not dishonest, by any means, but the work of a careless boy. I once saw on exhibition at a Fair crates of honey which looked fine in front, but many of the crates contained honey unfit for table use. Do you not think such things affect the honey market?

However, the people who guard against all of these things and try to give the customer just what he buys, are not troubled very long about a market for honey or anything else.

Canadian Beedom.

The North American Convention at Toronto.

The Toronto convention is just over, and I propose to write some jottings in regard to it, not with a view of giving complete details of the proceedings, or in any way forestalling the report which will be promptly furnished by the Secretary, Mr. Hutchinson, but simply to put an record some general impressions of the meeting while they are fresh and vivid, for the benefit of those who were not fortunate enough to be there.

In the first place, thanks mainly to the forethought and energy of Pres. Holtermann, the preliminary arrangements were made very thoroughly, and worked without a hitch. This remark applies both to the hotel accommodations and the facilities for the public gatherings. "Mine host," of the Palmer House, carried out his promises to the letter, and spared no pains to make his guests comfortable. The auditorium of the Normal School was a splendid place of meeting; the beautiful grounds, the easy access to the elegant hall, the classic surroundings, the corridors filled with statuary of the great literary lights of the past, the efficient caretaking, the absolute quiet of the surroundings, all combined to make an ideal place of assembly.

It was a joint meeting of the North American Bee-Keepers' Association and the Ontario Bee-Keepers' Association, the former of which, as the older and continental organization, as well as by courtesy the guests and visitors of the latter, naturally took the lead, and had precedence accorded to it. Special interest was given to the occasion by the presence of Rev. L. L. Langstroth, the father of bee-keeping in North America. Through the thoughtful generosity of a few friends who judged that a Northern trip would do him good, now that, happily, his health is in a measure recuperated, and his attendance at the meeting would add a pleasing feature to it, the means were furnished to enable him to come, and to make him comfortable while here. He was received with every mark of respect, the convention rising to receive him, and remaining standing while he was conducted to a seat of honor. Owing to deafness, he could not take part in the proceedings farther than to address the meeting several times, which he did with surprising strength of voice and clearness of intellect, considering that he is in his 85th year. All joined in hearty greetings and best wishes for continued long life, prosperity and happiness to the G. O. M. of American bee-keeping.

There was a good, though not very large, attendance of representative bee-keepers from both sides of the lines, although there were some conspicuous and much-regretted absences. Among these none was more generally felt than that of Dr. Miller. The genial Doctor is a convention in himself. There was another doctor on hand, however, one of the same type—Dr. Mason, of Auburndale, Ohio, who looked, as he is, the impersonation of good nature, cheerfulness and fun. As we say and sing on this side of the lines, "for he's a jolly good fellow," which nobody can deny. The Doctor also looked the embodiment of good health, as a doctor should do to advertise and recommend his profession. I wish this latter remark could be truthfully made of two other distinguished visitors from the United States—Thos. G. Newman and A. I. Root, both of whom are in feeble health, and only the shadow of their former selves. Mr. Newman, however, showed that although the outward man is out of repair, the inward man is as vigorous as ever. His masterly address—oration it might be called without any flattery—on the objects, work and achievements of the National Bee-Keepers' Union, delivered with great fervor and power, was the gem of the meeting. Mr. Root was, as usual, very silent, and played truant from the meeting a good deal, as he generally does, running around to see the gardens and conservatories, of which there are many in Toronto, far more than can be visited in the course of a two days' stay.

Mr. G. M. Doolittle—the worst misnamed man, surely, on the face of the earth—was present, to the great delight of many who knew him well through his admirable writings, but had never before met him. Like Dr. Mason, he has a splendid physique, and is the picture of good health, overflowing cheerfulness, and kind feeling toward everybody.

This meeting was also notable from the large attendance of lady members. Usually the queens of society have only been present in small numbers, but this time they were out in force. The "Home of the Honey-Bees," at Medina, Ohio, was represented by two young ladies—daughters of Mr. A. I. Root—chaperoned by Mr. J. T. Calvert, a run-away Canadian, who, having wandered around till he struck the Root establishment, succeeded in rooting himself there, by marrying the eldest daughter of the family, for which piece of good fortune he is to be congratulated, though his gain was our loss.

The bee-journal editors also were out in full force. Mr. York, of the "old reliable" American Bee Journal; Mr. A. I. Root, editor of Gleanings; Mr. W. Z. Hutchinson, of the Bee-Keepers' Review; Mr. Holtermann, editor of the Canadian Bee Journal; W. F. Clarke, agricultural editor of the Montreal Witness, and a frequent contributor to the bee-journals, made up a quintette of members of the fourth estate not often present at one and the same time.

Other distinguished Americans present, were: Mr. Aspinwall, a famous inventor of agricultural implements, among them the celebrated Aspinwall Potato Planter, and the Aspinwall non-swarming bee-hive; Mr. Ira Barber of New York State, who winters his bees in the torrid zone; and others "too numerous to mention." Among Canadian bee-keeping notables were Mr. J. B. Hall, President of the Ontario Bee-Keepers' Association; Mr. McEvoy, Foul Brood Inspector; Mr. Holtermann, lecturer on bee-keeping at the Ontario Agricultural College; Messrs. McKnight, Pringle, Pettit, Post, Darling, Wells, Holmes, Hoshall, Emigh, Gemmill, and other noted Canadian bee-men. I hope I have not omitted any who should be named with distinction, but I write from memory, not having a full list of attendants before me.

The most important matter discussed was the proposed amalgamation of the North American Bee-Keepers' Association and the National Bee-Keepers' Union. Mr. Newman's masterly effort in regard to this matter has been already mentioned. There was a spirited discussion in which Dr. Mason, Mr. York, W. F. Clarke, and others participated. The outcome of it was a proposed scheme of union, the development of which was left to a committee consisting of Dr. Mason, Messrs. Newman, Gemmill, Calvert, Holmes, Eugene Secor and R. F. Holtermann. Space will not admit of going into details, but the prospect is fair for a consolidation of the two bodies, which will conserve the interests of the National Bee-Keepers' Union, and put new life into the North American Bee-Keepers' Association under the name and style of the North American Bee-Keepers' Union—a consummation most devoutly to be wished.

Among the topics introduced by essays, and discussed, were: "The Surest and Best Way of Producing a Crop of Comb Honey," by B. Taylor, of Forestville, Minn.; "Introducing Queens," by S. T. Pettit; "Who Shall Winter Bees Out-of-Doors—Who in the Cellar?" by F. A. Gemmill; "Mistakes of Bee-Keepers and Bee-Journals," by Allen Pringle; "Some Things of Interest to Bee-Keepers," by G. M. Doolittle; and "Legislation for Bee-Keepers," by R. McKnight. The discussion on the last-named subject was rather hot and peppery, but the general verdict at the close of it was, "nobody hurt."

Early in the meeting an admirable address of welcome was made by Hon. John Dryden, Minister of Agriculture for the Province of Ontario; also an able summary of what is being done for the promotion of bee-keeping in the Ontario Agricultural College, by Dr. Mills, President of the institution. A lectureship was begun by way of experiment in 1890. During four years a class of 30 to 60 members was conducted by W. F. Clarke. The experiment was considered successful enough to warrant the establishment of a permanent lectureship, which is now in charge of R. F. Holtermann.

There was a full attendance at the evening sessions, but the number present was somewhat thinned during the day in consequence of the Toronto Industrial Fair, to which the managers gave the bee-keepers free access, and for which they were duly and cordially thanked by the convention.

Altogether, we Canadians think that our guests and visitors had a good time, and that the annual meeting of the North American Bee-Keepers' Association of 1895 will be remembered as a red-letter one, and will mark the dawn of a brighter and better epoch in the history of the organization. "So mote it be."

The American Bee Journal
ESTABLISHED IN 1861
OLDEST BEE-PAPER IN AMERICA

George W. York. - - *Editor.*

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Editorial Budget.

The Newly-Elected Officers of the North American are shown on the first and second pages of this number. Fine quartet, isn't it? They are one-fourth Canadian, one-half Ohioan, and one-fourth "Michigander." Good combination.

The Toronto Convention Report is begun this week, as you doubtless have noticed. It is going to be very interesting, as there were many good essays read, which were followed by interesting and profitable discussions. All new subscribers will have their subscriptions begin with this number so long as it holds out. By so doing, they will have the report complete. Next week I expect to give a bigger slice of it, and then crowd it right through as rapidly as possible thereafter.

Honey for Preserves and Children.—The British Bee Journal contained this paragraph about the use of honey in preserving fruit, and as a food for children:

In former years I was wont to use sugar for preserving a large supply of fruit which was kept for winter use; now I use honey, and find that fruit keeps sweet very much longer, and that, while sugar preserves become stale in a short time, honey preserves never do so. For children, a liberal use of honey is really invaluable; and since I began to use it I have not spent a shilling on doctors' medicines, whereas formerly I used to spend a good many.

The Langstroth Fund.—In response to the request made on page 556, I have received only $2.00—one from Rev. S. Roese, Maiden Rock, Wis., and one from Jas. F. Wood, North Prescott, Mass. The latter, when sending his dollar, wrote:

Somehow it makes me glad to contribute a dollar to the man that I learned to love 20 years ago, while I studied his great work, "The Hive and Honey-Bee." I was then only a boy, but I knew it nearly all by heart, and even to-day it is remarkable to note how free from error was his work.

JAS. F. WOOD.

A collection was taken up at the Toronto convention for the purpose of defraying Father Langstroth's expenses to Toronto, and it lacked about $20 of the amount that it was hoped would be raised. Possibly others may feel like contributing to help make up the amount. Though I'd rather not mention it, I might say that some of us gave five dollars each—others more—and all felt it was a good investment.

If you prefer, you can send direct to Rev. L. L. Langstorth, 120 Ford St., Dayton, Ohio, whatever amount you may feel will make him and yourself the most happy.

Convention Notes.

My convention experiences began about a week before the meeting, when I commenced to get my work ahead so as to be able to go to Toronto. I succeeded so well, that I could leave the Bee Journal office Monday morning, Sept. 2, when I took the train at 9 o'clock on the Grand Trunk railroad for Flint, Mich., where I was to spend one night with Bro. Hutchinson and his happy family.

I was on a slow train. It stopped at nearly every station, which gave me a good chance to "view the landscape o'er," which I did to my heart's content. I was delighted with the country, particularly that surrounding the beautiful cities of Valparaiso and South Bend, in Indiana; and Schoolcraft, Battle Creek, Lansing, Flint and Lapeer, in Michigan.

I reached Flint about 8 p.m. It was a delightful moonlight night, and after wandering around awhile I finally succeeded in locating the bee-yard and pleasant home of Bro. H.

The next morning before taking the train again for Toronto, I had a nice visit with all the family except Miss Ivy, who, unfortunately, was too sick to leave her bed. Misses Nora and Cora (the twins) played nicely together for me—one on the violin and the other on the piano. Baby Fern and I had a confidential chat on the front porch long before breakfast was ready. She's a bright child. One view of her is this: Seated on the printing-office floor, a pair of large spectacles on her nose, and a piece of proof in her hands—making her papa believe she's "reading proof," and helping him lots!

At 10:05 a.m., Bro. Hutchinson and I boarded the train for Toronto, arriving there at 7:30 p.m. It was my first experience outside of my native land. But I got along all right. Canada is a great country. Lots of her people are great, also. But the honey crop over there this year isn't causing any great amount of boasting. Same over here. But, then, every bee-keeper I saw seemed to be happy. Pretty hard to "down" them.

"Well, what about the convention?" did I hear you ask? It was held according to announcement. Began Wednesday eve and closed Friday noon.

Thursday evening Hon. John Dryden gave a magnificent address of welcome—why, he just wanted to annex the whole of us foreigners to Canada right then and there! He told what a wonderful country it was, painting it in such rosy colors that I, for one, felt he must have made a slight mistake, and was talking about our own United States. But it's all "America," anyway. Then Dr. Mills, President of the Ontario Agricultural College followed, in a most entertaining and practical address on the work of the college at Guelph. He is a very pleasant and forcible speaker. All through it was a most enjoyable evening.

Mr. J. B. Hall is another Dr. Miller, with one possible exception—he doesn't say "I don't know." He is President of the Ontario Bee-Keepers' Association, and I'm safe in saying there's no brighter Canadian bee-man. Too bad he can't be persuaded to write for the bee-papers. He's a "whole team" in a convention.

Then there's Mr. McEvoy, the foul brood doctor and exterminator. He isn't a bit slow—especially when he discovers an obstinate bee-keeper who won't follow his directions in ridding an apiary of foul brood. He's the new Vice-President of the Association, and I hope his good wife (whom I was glad to meet) will see that he does his duty.

Oh, yes, Dr. Mason was there. What a power he is in a convention! Lot's of fun in him, too. Always good-natured and happy. No man helped more than he to keep things lively, and make the convention a success.

Pres. Holtermann presided like an "old timer." He held things pretty level. It wasn't so easy, either, at times, but he succeeded admirably.

Mr. Pringle's essay was a pleasing surprise—at least to

me. He pointed out some of the "Mistakes of Bee-Keepers and Bee-Journals" in a sensible and kindly manner. He deserved a vote of thanks for his able effort, and would have received it, too, if it hadn't been for—well, the great majority would have given it gladly if they'd had a good chance.

Mr. Hutchinson, I regret to say, had been suffering with rheumatism for over a month before the convention, and came very nearly not being there at all. But he was there, and probably was none the worse for it, as he was extremely careful not to overdo. It would seem strange to attend a convention without Bro. H. there. He probably has attended more bee-meetings than any other American, living or dead.

There are a lot more "notes" that I'd like to give, but I'll have to wait till next week. Probably you will have had enough for one dose, by the time you've read all of this number of the Bee Journal.

The Next to the Last Page of this number of the Bee Journal shows some very tempting offers. Be sure to read them. Then let the publishers hear from you promptly.

Notice to Bee-Keepers.—I have received the following notice which will be of interest mainly to Illinois bee-keepers:

BRADFORDTON, Ill., Sept. 12, 1895.

On account of the failure of the Fat Stock Show at Chicago this fall, we are at a loss to know what to do about our Chicago meeting of the Illinois State Bee-Keepers' Association. We have asked the Western Passenger Association to give us reduced rates on the certificate plan, without requiring of us the 100 in attendance, assuring them that it is nearly always this requirement that causes our meetings to fall below the required number—because of the doubt in securing the same. But they will make no such promise. If we had the promise of the rates without any conditions, our meetings would continue to grow to the surprise of all.

If it be the desire of bee-keepers for a meeting regardless of the railroad rates, just let them make it known.

Let all our bee-keepers in and near Chicago be on the lookout for some occasion at that place that will give us rates, the same as we get them for our Springfield meeting Nov. 19 and 20, when the State Odd Fellows meet, and everybody gets rates without even a certificate (at least it was so last year, and they are hoping for it again now). We were about to announce our Chicago meeting for Oct. 30 and 31, when the Coliseum collapsed. After this year we will not be troubled so, we hope. (Gleanings and Review please copy.)

JAS. A. STONE, *Sec.*

Mr. W. A. Pryal, of North Temescal, Calif., in a letter dated Aug. 23, said that the honey-yield of his apiary was less than one-fourth of a crop this year. He reports the bees in good condition for next year.

Just 10,000 Copies of this number of the American Bee Journal will be mailed—some extra for samples to prospective subscribers. The new subscriber that gets in the soonest will get the most for his money. See page 611.

Among the Bee-Papers

Gleaned by Dr. Miller.

HOW TO PUT ON BEE-ESCAPES WITHOUT DOING HEAVY LIFTING.

This is, perhaps, a kink not yet discovered by some. It is easy when you know how. With a screw-driver or strong putty-knife pry loose one end of the super from the brood-chamber. Lift it up just a little way and blow in a little smoke. With the escape-board right handy, lift up with one hand one end of the super, and tilt it to an angle of 45 degrees. Now slip the escape-board under as far as you can; let the super down on to the board, and then with two hands crowd the board itself squarely over the hive, and finally, in like manner the super squarely over the escape. This is far easier than lifting the whole super off bodily, setting it on the ground if you can find a place, putting on the escape-board, again lifting the super off the ground and setting it very gently and squarely on the escape-board—*if* you can. I tell you, it is not easy to hold a hive-super, weighing perhaps 100 lbs., suspended in mid-air, and let it down *easily* and *squarely* over the board. The plan I gave first is, oh, so much easier! Try it, if you have not yet learned the knack of it.—Gleanings' editorial.

SWINDLERS.

Gleanings is holding up A. M. McLeod & Co., of Memphis, Tenn., as a good firm for bee-keepers to have nothing to do with. R. J. Mathews sent them honey to the amount of $67.80, and can get nothing. The "Co." part is a myth, and Mathews thinks McLeod is now doing business under the name of "The Memphis Pickle and Preserve Co." Pass him along.

THE AMERICAN BEE JOURNAL.

I have sometimes wished that Bro. York were not so good a friend of mine. Why? I have often read with interest the good things in his paper, and have felt like commenting on what he and his correspondents have said; but somehow I have felt that, if I did make such comments, a few (the anti-admiration-society fellows) would say I was doing it to pat "Bro. George" on the back. But, really, I do not know that this is any *good* reason why I should keep back anything that I wish to say, if it is deserving.

Well, it seems to me the "Old Reliable" grows better and better as it grows older; and in its 35th year, and in its latest number, we find more good, solid matter in it—practical, helpful matter—than at any time in its previous history; and in saying this I do not wish to disparage its past. The articles are well selected, sifted, pruned, and paragraphed. The "Question and Answer" departments, by Dr. Miller and others, are good. All through I think I can see the evidence of hard, painstaking editorial management.—Sept. 1st. Gleanings' editorial.

INTRODUCING QUEENS.

N. D. West gives the following plan in the Canadian Bee Journal:

"To introduce a queen to stranger bees, first remove the condemned queen, and then before closing the hive give them a queen in West's spiral wire queen-cage with a piece of hard candy 1½ inches long in the large end of the cage (use store candy). Then place the cage somewhere in the hive, on top of the frames or between the combs, and in from 30 to 48 hours the queen will be liberated. This all being done with but one operation, and the queen almost certain to be accepted, makes a short and pleasant job of queen-introducing."

BOTTOM STARTERS IN SECTIONS.

Since I used bottom starters, I don't have combs break out in sections in shipping as I formerly did. Often, before using bottom starters, a section would be finished, up with a space of about half an inch between the comb and the bottom-bar of the section; and in transportation such a comb would swing back and forth and break off. Besides, a section looks ever so much better to be filled clear down, and it weighs more.

There is another point in favor of bottom starters for those who have out-apiaries that I never thought of till I saw it mentioned in the "A B C of Bee-Culture." A starter that comes down within one-fourth inch of the bottom-bar of the section is inclined to swing in hauling to the out-apiary. If the starter is only an inch or so wide it will not swing at all. Just how wide it must be before it commences to swing, I do not know; but I know that a starter that fills the section all but a quarter of an inch will swing a great deal more than one that is three-quarters of an inch less.—DR. MILLER, in Gleanings.

THOSE FIVE-BANDED BEES.

In the way of honey, the three-banded, leather-colored bees were away ahead; and, oh how much pleasanter to handle! Moreover, the yellow ones were nosing around in a most disagreeable way, trying here and there to get a sip of honey while I was making an examination.

By the way, we had a bad robbing-spell, I am sorry to confess, at our home yard a few days ago. This is, you know, devoted to queen-rearing; and it seems one of the small nuclei failed to make the proper defense, and before we knew it there was an uproar. It was a most noticeable fact that the

leaders in this robbing were the *extra-yellow bees*, and there are only three or four colonies of them now in the whole apiary of 300 colonies and nuclei. Our Mr. Spafford, who has charge of the home yard, says he wants no more of them, and I am sure I don't; and, as a matter of fact, we have been getting rid of them as rapidly as possible.—Gleanings.

Extra-yellow bees are probably of all sorts. Mine are very gentle, and so far as I know, good in other respects. But I think we can count on greater uniformity among the leather-colored three-banders. J. W. Rouse has this to say about five-banded bees, in the Progressive Bee-Keeper:

"The way the five-banders work in my own apiary, and from the letters I get from time to time of how they are doing for others, and of how pleased many of my customers are to get these golden beauties, encourages me to go on with them, let others do as they like."

NUMBERS FOR HIVES.

There has been some discussion in Gleanings with regard to numbering hives. Movable tags made of tin, or manilla, well protected with linseed oil, are proposed to be kept among regular bee-supplies. Manilla being very much cheaper will probably win the day. The tags are fastened on by means of small, wire nails which can be *pushed* in without jarring the hives, or by means of screw-eyes.

CRIMSON CLOVER AS MANURE.

I sowed one-third acre of crimson clover on good onion ground Aug. 20, 1894, and it made a fine growth, and kept green until February, although the cold had been to 20° below zero. In February the top died down, but began to grow nicely in March, and was three weeks ahead of red clover on the same kind of ground. May 1st I had it plowed under, when it was 20 inches high, and there was such a heavy growth they had to use a chain to turn it under. I planted the ground to muskmelons, and the ground kept moist except about two inches on top, through the long drouth of six weeks in May and June. I think it was worth more than 30 loads of manure.—J. C. GILLILAND, of Indiana, in Gleanings.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

Bees Doing Nothing--Rearing Queens.

This is my second year in the bee-business. I live 4 miles from timber; my bees are doing no good. I moved them to a friend of mine who lives on the Brazos river, some 12 miles away. I kept three weak colonies with good queens, thinking to rear queens from them to supply my other colonies that did not have good queens. Now there are no drones in my home colonies. How will I manage to get my queens fertilized?

L. C. B., Texas.

ANSWER.—You are in a bad fix to rear queens so late in the season. You should have started to rear drones in July or August for your late queens. This could have been done by feeding up the colonies you intend for drones—get them strong. Place a frame of clean drone-comb in the center of the brood-nest, and alternate a few more frames of it among the brood-frames. Of course, you can only do this by removing some of the frames of the hive. As soon as drone-eggs are deposited, remove the combs to a queenless colony for nursing, care, and preservation.

Trouble in Managing the Frames.

DR. BROWN:—We have 11 colonies of Italian bees in 2-story self-spacing 8-frame hives. If the eight frames are not pushed *close together*, those stupid bees invariably build between, from comb to comb, and also build irregular excrescences all over and under and around the frames. If we push the frames close together they build beautifully inside, but the two outside combs are a sight to drive one to despair. They build the outside cells an inch and a half, or even more deep, at the top of the frame, and all sorts of irregularities towards the bottom, and usually they start a layer of cells against the sides of the hive. Then when we try to lift out a frame there is no room, and of course the poor things get crushed, the irregular pieces of comb break, and honey drips. Of course the bees blame us, and half the colony charges with such unquenchable zeal we can only cram back the frame, killing a lot of bees, and run for the house.

Every colony has these irregular outside frames, though they build beautiful comb, as a rule, inside. We cannot look into the brood-chambers at all, they get hurt so, even with the gentlest handling on our part.

Will you kindly tell us how to arrange the frames to avoid this irregularity?

We have another grievance. The queens want all creation to lay eggs in. Almost every frame in the upper story is filled with brood just as I suppose the brood-chambers are. We are considering the 10-frame hives. Perhaps that would remedy it. Queens and bees seem to be alarmed at the idea of wasting a quarter inch of space, though we never let them get overcrowded.

This is our first season, and the elements have been against us all through the year. Nevertheless, our colonies are in good condition now, though we shall get very little, if any, honey.

New Mexico usually furnishes a long, steady, but rather slow, honey-yield. This year heavy rains have increased the flow greatly, or we probably wouldn't have any bees by this time, for the rains that increased the flowers drowned out the bees. But we have had a year's experience that we wouldn't exchange for a small fortune. A. P. W.

Dona Ana, New Mex., Aug. 20.

ANSWER.—If your hives have the closed-end frames it is necessary that a division-board be used in order to make room for the easy removal of the frames. This board should always be pressed up close against the frames. Then if the frames preserve a distance of 1 7/16 inches from center to center, the bees will usually construct their combs straight within the frame, particularly if they have starters of foundation. With the old-style Langstroth frame it is more difficult to get them to keep all equal distance apart than with the Hoffman frame or with the closed-end top-bar frame. Weak colonies are more apt to make crooked combs than strong ones. Every frame should have a triangular comb-bar, and, then, if foundation is not used, rub a piece of beeswax along the sharp edge of this, and the bees will in almost every case follow it as a guide. Better still, use full sheets of foundation.

From the tenor of your letter, I infer that the 10-frame hive would suit you best. The 8-frame is too small for the majority of locations. The queen is kept crowded, and is more prone to go into the supers.

When bees are building combs, the hive should every now and then be examined, and all comb built outside of the frame should be pressed inside with a broad knife or spatula.

Bees Will Not Work.

I have several colonies of bees that do not appear to be working at all. Can I put two or three colonies together by destroying all except one queen? Or how can I get them to work, especially in the supers?

W. B. L., Columbia, S. C.

ANSWER.—You can unite your colonies by the plan you propose, but under the circumstances I do not think it advisable to do so. You say they won't work. I suppose the reason they do not, is because they can find no work to do. There is very little forage now—no honey to gather, and will not be before the middle of September. When there is a full honey-flow from the fall flowers, they often go into the supers, but more reluctantly than in spring. If your bees can store up enough surplus for winter, be satisfied. If there should be a good spring flow of honey, and, at the same time, your colonies are strong, they no doubt will readily go to work in the supers. It is a good idea to fill some of the sections with nice, new worker-comb as an inducement. A few sections filled with worker-brood is recommended by some bee-keepers as a bait to draw the bees to the supers.

Now is the Time to work for new subscribers. Why not take advantage of the liberal offers made on page 611?

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—OR—

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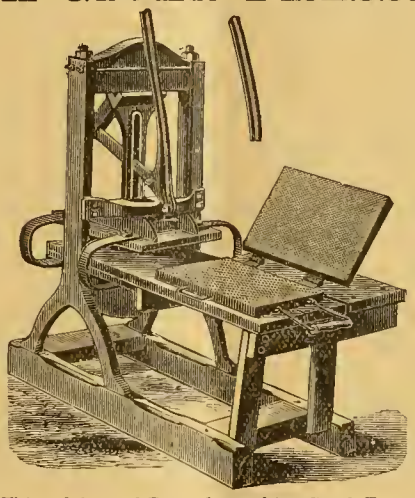

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QUALITY, WORKMANSHIP AND PRICES.

☞ Write for Free Illustrated Catalogue and Price-List.

G. B. LEWIS COMPANY, Watertown, Wis.

☞ Be sure to mention the American Bee Journal when you write.

General Items.

Good for a Dry Season.

My yield of honey from 60 colonies, spring count, was about 1,700 pounds; not a big yield, by any means, but good for this dry season, especially as basswood was our only source of nectar. It was exceedingly rich, but the ax and saw have almost stripped the country of its fine basswood.

A. H. SNOWBERGER.

Huntington, Ind., Aug. 27.

Not a Bountiful Honey Crop.

Bees did well the first part of this season. A good many bees starved last winter and spring around here, but those that came through did well in swarming-time, as we had plenty of rain and good weather to gather what they needed for breeding.

Bees have done well since the corn-tassel bloom. They are through with that now, and nearly through with the golden-rod, which was a great harvest for the bees this year, and now they are trying their skill on heart's-ease, which is in abundance here this year with us, so we expect the bees to gather enough for their winter stores, and if they keep on a little longer they may give us some honey to enrich our tables somewhat. They are working strong all the day long, and just now we are getting a blessed rain, which will help the bees along quite a good deal.

FRANK HENTRICK.

Wall Lake, Iowa, Aug. 24.

Bee-Keeping in New Mexico.

I am now located away out 32 miles from Silver City, in a valley of some more than 1,000 acres, in which is grown alfalfa. I am managing an apiary here, principally as an experiment. This apiary is located in the mountains, with no other bees within many miles. I am working to see what per cent. of honey may be gathered, and what will be the outcome of an apiary managed in this way. There will be a continuous bloom of alfalfa from the time it commences in spring until the frost will affect it. All work will be done practically and scientifically, and reports will be made in the bee-papers at the end of the season. All this will be done for the benefit of bee-keepers and others who take any interest in bee-literature. I shall experiment in many ways and report. I have been here now just two weeks. This is the rainy season of southwest New Mexico.

Our apiary now is about 5,500 feet above the sea-level. SIGEL BRANTIGAM.

Cliff, New Mexico, Aug. 21.

Marketing Honey, Etc.

Bee-writers tell some things they do know and some things they don't know. As to the large hive and the small hive, I take the 8-frame dovetailed hive in this locality. Mr. Dadant, about 70 miles south of us, takes the 10-frame hive. Mr. Secor, north of us, takes some other, I suppose.

Mr. Jas. F. Wood tells how to rear good hybrid queens. Jake Smith, in Gleanings, has so many visitors at his house that he doesn't have time to look after his bees. Next comes Dr. Miller, trying to poke fun at us all. Others are advertising different kinds of bees—the yellow Italians, golden Carniolans. I bought one of those golden Carniolaus from that fellow in Massachusetts who rears them from a queen valued at $100—claimed to be the gentlest bees on earth. They are very good honey-gatherers, but if you don't want to get stung you would better go somewhere else than where they are, or have your pant's legs tied up, a bee-escape on your head, and a 10-foot smoker in your hand.

I have a good market for both comb and extracted honey—15 cents for comb, 12½ for extracted. I produced one year 3,000

them from starving through the summer months. The drouth of last summer followed by a cold barren winter, and the continued drouth of this summer killing the clover family, is the cause of no honey this summer. Kill off the clover family in Wisconsin, and our bees would not store honey enough to live on, eight years out of 10. We are a basswood country, too. The old tree only blossoms every other year. The weather must be just right then, or it secretes no honey.

We are the small-fruit center of Wisconsin; large farms of blackberries, all the raspberry family, gooseberries and strawberries. We never see any of this fruit-blossom honey in the sections. It helps, for it is all used for brood-rearing in May. Do bees work on strawberries? Yes, they do; but it is so very little it is no benefit to the bee-keepers.

It is hard to tell what the poor little honey-bee is to live on in this country the coming few years. We will feed them as long as there is any sweet left to be had.

I came to this country in 1840. The Indians told us then that only a few years before the first swarms were seen passing over to the west, and then they knew the white man was coming close by.

Ripon, Wis., Aug. 26. R. DART.

Sweet Clover the Best.

Another year has proved to me that melilot or sweet clover is the best honey-plant in existence. There was not one pound of white clover honey in Lee county; basswood yielded very little honey, and catnip is good, but there is little of it. I have plenty of colonies that gave me 60 pounds of sweet clover honey this season, although we have had a severe drouth here. I will get over 3,300 one-pound sections of honey this season from sweet clover.

Compton, Ill., Aug. 27. R. MILLER.

Another Season of Failure.

This is another season of failure for the bee-keeper here. So far not any honey has been secured, and the prospect for a fall crop is poor. All vegetation is dried up, and unless we have a good rain soon, and frosts stay off until late, we will have to feed for wintering. I believe, as a general thing, bee-keepers have a good deal of grit, but it is trying one's patience to have failures three years in succession. No swarming at all this season. THOS. O. HINES.

Anamosa, Iowa, Aug. 24.

Convention Notices.

WEST VIRGINIA.—The Braxton County Bee Keepers' Association will meet at Sutton, W Va., Sept. 21, 1895. Everybody invited to be present. JACOB FRAME, Sec.

Sutton, W. Va.

MINNESOTA. — The next meeting of the Southern Minnesota Bee-Keepers' Association will be held at Winona, Oct. 15 and 16, 1895. All members are urgently requested to attend. All bee-keepers and others interested are cordially invited. E. C. CORNWELL, Sec.

Winona, Minn.

WISCONSIN.—The Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting at Platteville, Wis., Oct. 8 and 9, 1895. "Come, every one." Don't get discouraged if we haven't got a crop of honey. We will have a good time at Platteville, just the same Bring your wives and daughters with you. Many interesting subjects will be discussed. M. M. RICE, Sec.

Boscobel, Wis.

UTAH.—The Utah Bee-Keepers' Association will hold their semi-annual meeting in Room 54, City and County Building, Salt Lake City, Oct. 5, 1895, at 10 a.m. All are invited. Come and have a good time. Many interesting subjects will be discussed. Among other questions to be considered will be Markets and Transportation. A union of interest in the industry is much desired.

Provo, Utah. GEO. E. DUDLEY, Sec.

Lumber and Log-Book. — Gives measurements of lumber, logs, planks; wages, etc. 25c.

Non-Swarming Bees

I am rearing Queens from a strain of yellow-banded Bees that have never been known to cast a swarm! Can any other bee-keeper make such a claim? These Queens are a beautiful orange-color, very prolific, and produce handsome three-banded workers. The Bees are great honey-gatherers, very gentle, enter the sections readily, cap their honey snow-white, and winter on the summer-stands in perfect condition in any climate; and in most cases can be handled without smoke or protection of any kind. I can fill an order by return mail for 200 Queens. Safe arrival and perfect condition guaranteed: when otherwise, another Queen will be sent by return mail.

One **Tested** Queen, $1.00; three Queens, $2.75; six Queens, $5.50; twelve Queens, $9. All my Queens are mailed in self-introducing cages, and directions for safe introduction with each Queen.

HENRY ALLEY,

36A WENHAM, Essex Co., MASS.

Queens and Queen-Rearing.—If you want to know how to have queens fertilized in upper stories while the old queen is still laying below; how you may *safely introduce* any queen, at any time of the year when bees can fly; all about the different races of bees; all about shipping queens, queen-cages, candy for queen-cages, etc.; all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know—send for Doolittle's "Scientific Queen-Rearing"—a book of over 170 pages, which is as interesting as a story. Here are some good offers of this book:

Bound in cloth, postpaid, $1.00; or clubbed with the BEE JOURNAL for one year—both for only $1.75; or given free as a premium for sending us three new subscribers to the BEE JOURNAL for a year at $1.00 each.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

J. A. LAMON, 43 South Water St.
S. T. FISH & CO., 189 S. Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 120 & 122 West Broadway.
CHAS. ISRAEL & BROS., 486 Canal St.
I. J. STRINGHAM, 105 Park Place.
FRANCIS H. LEGGETT & Co., 128 Franklin St.

Kansas City, Mo.

C. C. CLEMONS & Co., 423 Walnut St.

Buffalo, N. Y.

BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

Philadelphia, Pa.

WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

Binders for this size of the American Bee Journal we can furnish for 75 cents each, postpaid; or we will club it with the Bee Journal for a year—both for $1.60. We have a few of the old size (6x9) Binders left, that we will mail for only 40 cents each, to close them out.

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Aug. 25.—We are having considerable inquiry for comb honey. We have as yet received but a few small consignments. We quote: Fancy white, 15c.; No. 1 white, 14c. Extracted, 5@7c.

Beeswax, 25@27c. J. A. L.

KANSAS CITY, Mo., Aug. 20.—The receipts of new comb and extracted honey is fair, the demand not large, but will increase with cooler weather. We quote: No. 1 white comb, 1-lbs., 14@15c.; No. 2, 12@13c.; No. 1 amber, 11@12c.; No. 2, 10@11c. Extracted, white, 6@6½c.; amber, 5½@6c.; Southern, 4½@5c.

Beeswax, 22@25c. C. C. C. & Co.

PHILADELPHIA, PA., Aug. 19.—New crop of comb honey is coming in more freely and generally in good condition. Demand is now beginning to spring up. New extracted is arriving in a small way. We quote: Fancy comb, 14@15c.; good, 13c.; fair, 9@11c. Extracted, 4½@5½c. It is hard to get our market to rally after the blow it received in the spring on discovering such a large amount of beeswax adulterated. We quote pure wax, 22@25c. W. A. S.

ALBANY, N. Y., Sept. 6.—Honey market opening with good demand. Receipts lighter so far this year than last, but do not look for higher prices. We quote: White comb, 14@15c.; mixed, 13@14c.; dark, 11@12c. Extracted, white, 6½@7½c.; mixed, 6@6½c.; dark, 5½@6c. Beeswax, 28@29c. H. R. W.

CHICAGO, ILL., Sep. 4.—The new crop is coming forward and sells at 15@16c. fur best lots; dark grades, 9@12c. Extracted ranges from 6@7c. for white, and 5@5½c. for colored, flavor and package making difference in price.

Beeswax, 27@28c. R. A. B. & Co.

BUFFALO, N. Y., Aug. 23. — Receipts of honey are light as yet. Comb and fancy stock would sell at 14@15c.; choice, 12@13c.; buckwheat is moving exceedingly slow and is hard to place. The indications are that early shipments will realize the best results.

Beeswax, 25@30c. B. & Co.

CINCINNATI, O., Aug. 7.—Demand is lively for new extracted and comb honey, all old honey being closed out. Arrivals are fair but insufficient for the demand. Comb honey brings 14@15c. for choice white. Extracted, 4@7c.

Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. M. & S.

CHICAGO, ILL., Aug. 23. — Fancy white comb honey (1-lbs.) in nice, clean packages sells at 16c.; other grades of white honey, 14@15c.; amber, 13@14c. We are having a good trade in extracted honey, selling light amber and white at 6@7c.; dark, 5@5½c. depending on quality and style of package. Early shipments to market advised so as to permit of sale before cold weather sets in.

Beeswax, 28c. S. T. F. & Co.

NEW YORK, N. Y., Sept. 11.—New crop of comb honey is arriving and while the receipts from N. Y. State are light, we are receiving large quantities from California. Had two cars of choice comb and have several more to follow. On account of warm weather the demand is rather light as yet. We quote: Fancy white, 1-lbs., 15@16c.; fair white, 12@13c. No demand as yet for buckwheat and dark honey. Extracted is plentiful, especially California and Southern. We quote: California, 5@5¼c.; white clover and basswood, 6@6¼c.; Southern, 45@55c. a gallon.

Beeswax in fair demand and firm at 28@29c.

H. B. & S.

Wants or Exchanges.

This department is only for your "Wants" or bona-fide "Exchanges," and such will be inserted here **at 10 cents a line** for each time, when specially ordered into this department. Exchanges for cash or for price-lists, or notices offering articles for sale, will not be inserted here—such belong in the regular advertising columns, at regular rates.

TO EXCHANGE.—Ash, Box-Elder, or Basswood Seeds; Black Currant or Juneberry Bushes—for Apiarian Supplies.

P. H. EMERY, Summit, So. Dak.

pounds, and only had 36 colonies in the spring to begin with. The way I sell my honey is this: I hitch the team to a spring wagon, load in the honey, and drive to different towns and supply the groceries. I have no trouble to sell after I get it introduced. I will have to start another apiary in order to supply my demand. I generally have honey three weeks before other bee-keepers around me have any.

I am not a hybrid-bee nor a black-bee apiarist; I do not believe in them. I have queens from the best breeders in the United States. I rear queens from those which make my best honey-gatherers. I use my inferior stock for extracting; from those I draw brood-combs if others are short of stores. W. A. SHAFNIT.

Brighton, Iowa, Aug. 19.

Bees Did Well.

I find the American Bee Journal a true bee-keepers' guide, and would not be without it any more.

Last fall I put into the cellar 15 colonies, and last spring I had 9 left; now I have 22 in all. My bees are doing splendidly. I have sold extracted and comb honey up to this date, 320 pounds at 15 cents. Soon I will have buckwheat honey ready for market. HENRY F. IMHOLT.

Stillwater, Minn., Aug. 23.

Lots of Bee-Trees.

In this Ozark Mountain region there have been 53 bee-trees found and cut by six of us mountain climbers, myself included, that averaged 46 pounds of honey to the tree, besides from one to five pounds of wax to the tree, in a space of 3x8 miles.

Bees are doing better now, as the mountains are covered with wild flowers. I send a flower that I have never seen anything like before, that the bees just swarm on. It grows in a marsh at the foot of one of the mountains. I think it is valuable for honey, as the bees leave it heavy loaded. I will save some of the seeds when it gets ripe, and if any of the Bee Journal readers would like to try the value of it as a honey-plant, I will send a few of the seeds.

J. R. GIBSON.

Redford, Mo., Aug. 23.

Very Dry—Poor Crops.

We have 11 colonies of bees, and will have 200 or 300 pounds of surplus honey, and 4 swarms. Last year there was not a swarm, and but 60 pounds of honey. It is very dry now—no heavy rain since June 10. Crops are poor here, but the north end of this county (Dickinson) has immense corn.

A. E. SIMMERS.

Abilene, Kans., Sept. 7.

Results of the Season.

A synopsis of my business this year: 94 colonies, spring count, after a serious chill about May 12, in which there were 60 colonies barely left alive. Present count, 135, and 7,000 pounds of surplus honey. They will go into a shed-cellar with from 40 to 75 pounds for winter and spring consumption.

W. S. MITCHELL.

Flora Vista, New Mex., Aug. 4.

An Unfavorable Wisconsin Report.

I hope every bee-keeper taking the old American Bee Journal will send in his or her report for the season's work for 1895.

My bees wintered fairly well. My loss of swarms in May and June were one-half; all left plenty of honey, and bright and clean combs. From strong colonies they ran down to a handful and their queen. Feeding of those left, through the whole summer, to prevent starving has been regular business. These losses in the months of May and June I cannot account for. I never had them before, and I am 50 years a bee-keeper right here in Wisconsin, and never before had to feed my bees to keep

THE "NOVELTY" POCKET-KNIFE!

Your Name on the Knife.—When ordering, be sure to say just what Name and Address you wish put on the Knife.

The NOVELTY KNIFE is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed an AMERICAN BEE JOURNAL reminder, and on the other side, name and residence of the Subscriber.

The material entering into this celebrated knife is of the very best quality; the blades are handforged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring steel, and the finish of handle as described above. It will last a lifetime, with proper usage.

Why purchase the Novelty Knife? In case a good knife is lost, the chances are, the owner will never recover it; but if the Novelty is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the Novelties, your pocket KNIFE will serve as an identifier; and in case of death, your relatives will at once be apprised of the accident.

How appropriate this knife is for a Christmas, New Year or birthday present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, a lady to a gentleman, or vice versa, a son to a mother, a husband to a wife, a brother to a sister or a gentleman to a lady—the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid, for $1., , or give it as a Premium to the one sending us **three new Subscribers** to the BEE JOURNAL (with $3.00), and we will also send to each new name a copy of the Premium Edition of the book "Bees and Honey." We club the Novelty Knife with the BEE JOURNAL for one year, both for $1.90.

Any Name and Address Put on the Knife.

GEORGE W. YORK & CO.,
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Allow about two weeks for your order to be filled.

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Why pay 60 to 90c. a rod for fence when you can make the
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Horse high, bull strong, pig and chicken tight. A man and boy can make from 40 to 60 rods a day. Over 50 styles. Illustrated Catalogue Free.
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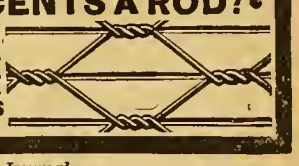

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—REVISED BY THE DADANTS—

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Always ship the Wax by Express, and prepay the charges; also put your name and address on the package to avoid mistakes.

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Untested Italian Queens, by return mail, 75c; Tested, $1.00; Select Tested, $1.50.
Nuclei, by express—per Frame, 75c.
Address, C. E. MEAD,
87 Artesian Ave., Station D, CHICAGO, ILL.

Comb Honey, Extracted Honey, and BEESWAX.

Spot Cash paid for Goods at Market Prices.

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J. P. H. BROWN, AUGUSTA, —GA.—

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Why Buy Comb Foundation in Preference to Making It?

Query 988.—Why do those who buy foundation prefer doing so to making it themselves?—Africa.

B. Taylor—Because it is more economical.

W. R. Graham—Because it is cheaper to do so.

Rev. E. T. Abbott—Because they can get better foundation.

W. G. Larrabee—Because it is less work, and very few know how.

J. M. Hambaugh—Experts can do better work than the inexperienced, every time.

H. D. Cutting—The want of wax, and the trouble and bother of making good foundation.

Rev. M. Mahin—Because they can buy it cheaper than they can make it, and get a better article.

J. E. Pond—For myself, because I can buy it cheaper than I can make it, and I get better foundation, also.

J. A. Green—My reason is that I believe freshly-made foundation is more readily worked by the bees.

G. M. Doolittle—Because they do not use foundation in large enough quantities to pay for fussing with it.

Prof. A. J. Cook—They do not use a very large amount, and the expense of the machines decides them to buy the product.

Mrs. L. Harrison—Because they are not "jack of all trades;" can employ their time to better advantage in some other way.

E. France—Foundation machines cost money, and when you have the fixtures you have to learn the trade before you can make good foundation.

Dr. C. C. Miller—Like many other things, those who make it on a large scale can sell it cheaper than the average bee-keeper can make it.

Jas. A. Stone—The only reason I can give is the bother of getting all the needed apparatus; and unless one is a specialist, there is no time for it.

Dr. J. P. H. Brown—It does not pay to try to make foundation for mere individual use. It requires skill and long experience to make it as it should be.

Mrs. J. N. Heater—I buy my foundation simply because I do not wish to enter into the manufacturing of it on a large scale, and it would hardly pay to make up small quantities.

P. H. Elwood—I can answer for myself only. 1st, we have too much work, and can hardly add another man to our family. 2nd, we buy a more uniform product than we can make ouselves.

J. M. Jenkins—Why do you buy hats, and shoes, and sewing machines, and wagons, rather than make them? Because you can buy them cheaper than you can make them, and get a better article than you can make. The production of either involves the use of special tools and machinery, and a thorough knowledge of the business. Same way with foundation—you have to be *fixed* for it, and you have to *know how*, or you can't make it as good, or as cheaply as you can buy it.

R. L. Taylor—For divers reasons. Some require too little to manufacture it profitably; some fear the difficulties to be encountered in making it; some lack the skill required to make it satisfactorily, etc.

C. H. Dibbern—Large manufacturers become very expert and produce a better article than an amateur is apt to do. Then unless one has plenty of time, and large quantities are required, it doesn't pay very well.

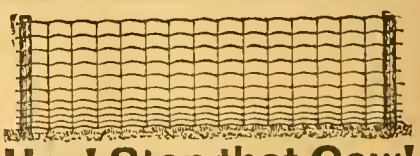
W. M. Barnum—I can buy for about the same figure it would cost me to make it. I can devote the time required in making it to more profitable account; and I do not care to bother with it. (I save and sell all beeswax, however.) See answer to Query 987.

Chas. Dadant & Son—Because foundation making is like cigar-making. It is not very difficult, but it takes a little practice, and a bee-keeper usually spoils what beeswax he has, making a trial. Many farmers raise tobacco. How many make their own cigars?

Eugene Secor—Speaking for myself only, for the same reason that I buy my clothing, instead of making it. Foundation-making isn't my trade, and if I do not use more than 25 pounds a year, I could hardly afford to own the necessary machinery and acquire the necessary skill to compete with Dadants or Van Deusen.

Allen Pringle—Each one doubtless would have his own reasons. Mine are, that, considering the price of a good mill, and the commercial value of my time (to say nothing of the moral and social value), I can get the foundation cheaper by hiring it made. I have enough to do without making foundation, and if I had not, I could make more money at something else while I would be at the foundation.

G. W. Demaree—Making comb foundation is a *trade*, that must be learned, and many people do not have the skill to learn. Besides this, it requires an outfit at some cost, to get ready to manufacture a good article of foundation, and this outfit when used to make foundation for a single apiary, must be *idle* and doing nothing except for a few days in the year. If you have a large, profitable apiary, you can profitably make your own foundation; otherwise not.



Hey! Stop that Cow!

The voice came tearing down the road closely followed by the animal itself. The wheelman addressed was an expert base ball player, but hardly knew how to tackle that kind of a "flyer." She was the "coming cow" that had "thrown off the yoke" so to speak. By waving his coat he turned her into a string of Page fence. With a beautiful "curve" she landed in the ditch and was led off completely subdued. The wheelman exclaimed, as a "catcher," a "pitcher," a "short-stop" and a "fielder," the Page fence is in it.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

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For **each New** Subscriber to the American Bee Journal sent us by a present subscriber, we will give as a Premium **30 cents' worth** of the Books, Pamphlets, etc., described on this page—figuring on the **retail price** given in connection with each book, etc., below. This is a very easy way to get a lot of most excellent literature.

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Yes, in addition to the above offer, we will mail free a copy of Newman's 160-page "Bees and Honey"—premium edition—to each new subscriber. On **new** subscriptions, the $1.00 will pay for the Bee Journal from the time it is received **to the end of 1896.** NOW IS JUST THE TIME to work for big lists of New Subscribers.

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SENT POSTPAID BY

George W. York & Co.,

Chicago, Ills.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains 250 pages, and 245 illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, $1.00.

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Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages; bound in cloth and fully illustrated. Price,

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of Queen-Bees are reared in perfect accord with Nature's way. 176 pages, bound in cloth, and illustrated. Price, $1.00.

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Convention Hand-Book, for Bee-Keepers.—Thomas G. Newman.—It contains the parliamentary law and rules of order for Bee-Conventions—also Constitution and By-Laws, with subjects for discussion, etc. Cloth, gold-lettered. Price, 25 cts.

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☞ If 500 or more are ordered at one time, your name and address will be printed on them FREE.

How to Keep Honey and preserve its richness and flavor. Price same as Why Eat Honey.

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Bees in Winter, Chaff-Packing, Bee Houses and Cellars. This is a chapter from BEES AND HONEY. Price, 5 cents.

The Hive I Use, by G. M. Doolittle. It details his management of bees, and methods of producing comb honey. Price, 5 cents.

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Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. Price, 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 25 cts.

History of Bee-Associations, and Brief Reports of the first 20 conventions. Price, 15 cts.

Honey as Food and Medicine, by T. G. Newman.—A 32-page pamphlet; just the thing to create a demand for honey at home. Should be scattered freely. Contains recipes for Honey-Cakes, Cookies, Puddings, Foam, Wines, and uses of honey for medicine.

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Commercial Calculator, by C. Ropp.—A ready Calculator, Business Arithmetic and Account-Book combined in one. Every farmer and business man should have it. No. 1, bound in water proof leatherette, calf finish. Price, 40 cts. No. 2 in fine artificial leather, with pocket, silicate slate, and account-book. Price, 60 cts.

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Poultry for Market and Poultry for Profit, by Fanny Field.—Tells everything about the Poultry Business. 64 pages. Price, 25 cts.

Turkeys for Market and Turkeys for Profit, by Fanny Field.—All about Turkey-Raising. 64 pages. Price, 25 cts.

Rural Life.—Bees, Poultry, Fruits, Vegetables, and Household Matters. 100 pages. 25 cts.

Strawberry Culture, by T. B. Terry and A. I. Root. For beginners. Price, 40 cts.

Potato Culture, by T. B. Terry.—It tells how to grow them profitably. Price, 40 cts.

Carp Culture, by A. I. Root and Geo. Finley.—Full directions. 70 pages. Price, 40 cts.

Hand-Book of Health, by Dr. Foote.—Hints about eating, drinking, etc. Price, 25 cts.

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Maple Sugar and the Sugar Bush, by Prof. A. J. Cook.—Full instructions. Price, 35 cts.

Grain Tables, for casting up the price of grain, produce, hay, etc. Price, 25 cts.

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(Read Carefully.)

The following clubbing prices include the American Bee Journal one year with each book named. Remember, that only ONE book can be taken in each case with the Bee Journal a year at the prices named. If more books are wanted see postpaid prices given with the description of the books on this page. Following is the clubbing-list:

1.	Langstroth on the Honey-Bee	$2.10
2.	A B C of Bee-Culture	2.00
3.	Bee-Keeper's Guide	1.75
4.	Bees and Honey [Cloth bound]	1.65
5.	Scientific Queen-Rearing	1.75
6.	Dr. Howard's Foul Brood Book	1.10
7.	Advanced Bee-Culture	1.30
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10.	Rational Bee-Keeping [Cloth bound]	2.00
11.	Rational Bee-Keeping [Paper bound]	1.75
12.	Thirty Years Among the Bees	1.30
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14.	Convention Hand-Book	1.15
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19.	How We Made the Old Farm Pay	1.15
20.	Green's Six Books on Fruit-Culture	1.15
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24.	Emerson Binder for the Bee Journal	1.60
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26.	Commercial Calculator, No. 2	1.40
27.	Kendall's Horse-Book	1.10
28.	Rural Life	1.10
29.	Strawberry Culture	1.20
30.	Potato Culture	1.20
31.	Carp Culture	1.20
32.	Hand-Book of Health	1.10
33.	Dictionary of Apiculture	1.35
34.	Maple Sugar and the Sugar Bush	1.20
35.	Silo and Silage	1.10
36.	Winter Problem in Bee-Keeping	1.30
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38.	Apiary Register (for 100 colonies)	2.00
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It is always economy to buy the best, especially when the best cost no more than something not half so good. OUR FALCON SECTIONS are acknowledged to be superior to any on the market. The same is also true of our HIVES and BEE-KEEPERS' SUPPLIES, of which we make all modern styles. OUR PRICES will be found as low as those of any of our competitors, and in many cases lower, and you are always sure of getting first-class goods. We also publish THE AMERICAN BEE-KEEPER, a monthly magazine (Fifth year) at 50c. a year, invaluable to beginners. Large illustrated catalogue and price-list free. Address,

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☞ **W. M. Gerrish,** of **East Nottingham, N. H.,** is our Eastern agent. New England customers may save freight by purchasing of him.

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If you do not sell the honey? That's what we are here for. Get our high prices before selling.

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Commission Merchants,
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HONEY QUEENS!

Have been carefully bred for producing comb honey for the past 18 years, and by a special method for producing large, long-lived, prolific Queens. Can furnish either 3 or 5 Banded stock, bred in separate yards. 3-Banded bred from my own or Imported Mother. No foul brood or paralysis. Warranted Queens, purely mated, 60 cts.; Tested, $1.00; Selected Breeders, $2.50. Discount on quantities.

27Atf **J. H. GOOD, Nappanee, Ind.**

COMB FOUNDATION.

Wholesale and Retail.

Quality always the best. Price always lowest.

Working Wax into Foundation by the lb. **a Specialty.** I can make it an object for you in any quantity, but offer special inducements on straight 25 or 50 lb. lots. Or for making large lot of Wax into Foundation. I am furnishing large Dealers, and can also please you. **Beeswax taken at all times.** Write for Samples and Prices, to

GUS DITTMER, AUGUSTA, WIS.
Reference—Augusta Bank. 16Atf

WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

Free Silver is a good thing but here's something better For You

Until further notice I will furnish **COMB FOUNDATION** as follows:

10 lbs. Heavy or Medium Brood Fdn.		$3.50
10 lbs. Light	"	3.60
10 lbs. Thin Surplus Foundation....		4.00
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No orders will be accepted at these prices from persons living east of New York State.

For BEESWAX—fair quality, delivered here, 27c. cash; 29c. in trade.

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I will send a Guaranteed 5-Banded Yellow Queen, bred from a Breeder selected from 1000 Queens (some producing over 400 lbs. of honey to the colony); or a 3-Banded Italian Leather-Colored Queen direct from a Breeder imported from Italy. Oct. '94—**at 75c.,** and a special low price for a quantity.

My secret is to sell an extra-large amount, which enables me to sell at low prices. Will run this spring 350 Nuclei—have 1 home and 4 out apiaries. No Queens superior to my Strain.

☞ Send for Descriptive Catalogue and Testimonials. to

WM. A. SELSER, WYNCOTE, PA.

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In response to many inquiries I will renew my special offer for a short time only:—

Five "St. Joe" Hives, 1½-Story, cut ready to nail—no sections—for $3.50 to any one who has never had a crate of these Hives.

I sell Dadant's Foundation at their prices; pay CASH for BEESWAX, and keep a stock of

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SPECIAL PRICES the rest of the season. Write and say what you want.

EMERSON T. ABBOTT,
WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL. ST. JOSEPH, MO.

A THOUSAND TONS OF COMB HONEY

Will be made on the Foundation sold by us this year. That is why

WE NEED BEESWAX.

Now is the time to order your Foundation for 1896. Although the

PRICES ARE REDUCED

on both Beeswax and Foundation for the balance of the season, we want all

The Beeswax You Have to Offer.

☞ Send for Catalogue of **Bee-Supplies, Langstroth Revised, etc.**

CHAS. DADANT & SON,
Mention the American Bee Journal. HAMILTON, Hancock Co., ILL.

PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. VAN DEUSEN & SONS,
Sole Manufacturers.
Sprout Brook Montgomery Co., N. Y.
Mention the American Bee Journal.

Select Tested Italian Queens

Friends, I will have 200 Select Tested Queens for sale Sept. 1, at $1.00 each or $10.00 per dozen. Untested, 50 cents each, or $5.00 per dozen. Tested Queens 75 cents each, or $6.00 per dozen, either Golden Italians or Imported stock at same price. Safe arrival and satisfaction guaranteed. Address.

F. A. CROWELL,
31Atf GRANGER, MINN.

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Now ready by return mail, reared in full colonies from the best honey-gathering strains in America, at the following very low prices:

Tested.....each	$1.50
" per ½ dozen.....	8.00
Warranted purely-mated.....each	.75
" per ½ dozen.....	4.25
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If you want **Queens for business,** get my old reliable strain. 40-p. descriptive Catalog Free. **W. W. CARY, Colrain, Mass.**

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Discount—5 to 10 Per Cent.

—ON—

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105 Park Place. NEW YORK, N. Y.

TAKING OFF HONEY

—WITH—

THE PORTER BEE-ESCAPE

Has been styled the Poetry of Bee-Keeping. Saves time, brushing of combs, ugly stings, smoke, uncapping of the cells, robbers, and, in a word, a large amount of annoyance.

Price, 20 cts. each, or $2.25 per Box of One Dozen.

Write to your nearest dealer, or to the A. I. ROOT CO., who have the control of the sale of this implement.

The A. I. Root Co., Medina, Ohio.

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AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS

35th Year. CHICAGO, ILL., SEPT. 26, 1895. No. 39.

Report of the Proceedings

OF THE

Twenty-Sixth Annual Convention

OF THE

North American Bee-Keepers' Association,

HELD AT

TORONTO, Ont., Sept. 4, 5 and 6, 1895.

W. Z. HUTCHINSON, SEC.

(Continued from page 599.)

Selling Honey.

At the first evening session Mr. Moyer, a grocery merchant of Toronto, gave a short history of his experience in building up a trade in honey. He had found it necessary to do a great deal of educational work in getting people to buy honey. It was necessary to talk to people and call their attention to the honey. If poor people could not afford to buy butter, they were advised to get honey. Customers fear adulteration. The fact that extracted honey is cheaper than comb honey leads people to think it must be adulterated. During the last year he had retailed four or five tons of honey.

A. E. Hoshal—I have sent a great deal of honey to this market, and found that it must be first-class. There is no use in trying to palm off second grades. Better send that somewhere else—down to Quebec, or some other place.

Allen Pringle—I must protest against the use of the words "palming off" in speaking of disposing of second-grade honey. Buckwheat honey is good, pure honey, and we ought not to call it "poor stuff." Don't say we "palm it off."

Mr. Hoshal—It is often gathered late, and is not then thoroughly ripened. It may then be "poor stuff."

J. K. Darling—Buckwheat is all sealed over and is thick. It can scarcely be thrown out with the extractor.

Wm. Couse—The one great thing necessary in selling honey is cleanliness. Mr. Moyer keeps his place exceedingly clean and neat, and it is a great aid to him in building up his trade.

John McArthur—I have sold a ton of buckwheat honey in Toronto. At our exhibitions we show too much liquid honey and not enough in the candied state.

S. T. Pettit—I agree with Mr. McArthur, that we should show honey in the granulated state.

Mr. Hoshal—All packages for extracted honey should be sealers. If they are not sealed, and a customer picks up a package and tips it up, as is usually the case, a small quantity of honey runs out under the cover, and then down the side of the jar. The flies soon attack it, and the result is a mussy affair. It is no wonder that many grocers are disgusted with honey. I use a three-pound pail that seals. The pail and all weighs three pounds. The customer pays for the pail by paying so much a pound for it, the same as he pays for the honey. Such a package costs five cents. The tin should be bright, and the labels of such a color that they harmonize with the tin. Bronze and red harmonize with the bright tin.

J. T. Calvert—A new package for honey has lately come to our notice. It is made primarily for butter or lard, and a rubber band is used to make it tight.

The Delayed Report of Last Year.

Mr. Benton having come in, he was asked to explain why he had failed to send in the whole of his report of last year's proceedings.

Frank Benton—The report has been ready for months, and if it has not been published it is the fault of Mr. York. He has 75 pages now on hand, and neither publishes it nor will he return it, although I sent him stamps to pay the postage on its return.

G. W. York—It is true that he sent in 85 pages, but 75 pages of it was all one essay—Mr. Benton's—and it was so long that it would have taken up nearly one whole number of the Bee Journal. Another thing, it was never read at the last convention. He did send stamps for its return, but I sent them back. I told him that when he sent in the whole of the report I was ready to go on with its publication, but until I had it all in hand so that I could see how it was coming out, and plan accordingly, I should publish no more. Only a publisher knows how aggravating it had been to wait, and wait, each week, for "copy," and not know whether it was coming or not; to hold back other matter to leave room for the report, and then not have it come, and at the last moment have to put in something else that may not be what would have been selected if time could have been had for its selection. When Mr. Benton sends in the whole report, I am ready to go on with its publication.

Dr. Mason—If the whole report is sent in when Mr. Benton should send it, then if Mr. York does not publish it, he is to blame.

Mr. Benton—Mr. York says the essay was not read at St. Joseph. I said at the beginning that it was not all read, as it was too lengthy to read. I did not send in any more because I could not be assured that it would not be changed and altered as the other matter had been treated. When I make out a report I do not want one word changed. As I have to sign the report as Secretary, I think that I have this right.

Mr. York—I have made no changes except to correct errors, and that I will do every time, when I see them, I don't care who has made them. I will not knowingly publish errors.

J. T. Calvert—I don't see how Mr. York can publish a report unless he has it to publish.

Dr. Mason—Mr. Benton was employed by this Association to get out a report, and paid $25 for doing this work. It is his business to get out the report and turn it over to the man appointed to print it. He would then have cleared *his* skirts. Then if Mr. York did not do *his* duty we should sit down on *him*. Perhaps they are both to blame, but just now it looks as though Mr. Benton needed to be sat down on the hardest; but there is no use of taking valuable time in discussing this matter, and I move that a committee of three be appointed by the chair to investigate the matter and report. Supported by J. T. Calvert. The following committee was then appointed: Dr. A. B. Mason, Ira Barber and J. T. Calvert.

The convention then adjourned until 9 a.m. the next day.

SECOND DAY—THURSDAY MORNING SESSION.

The following members paid their annual dues:

Allen Pringle, Selby, Ont.
W. L. Coggshall, West Groton, N. Y.
W. C. Wells, Philipston, Ont.
J. B. Hall, Woodstock, Ont.
H. J. Beam, Black Creek, Ont.
E. H. Stewart, Niagara Falls, N. Y.

G. M. Doolittle, Borodino, N. Y.
E. A. Stratton, Horseheads, N. Y.
H. E. Bliss, West Winfield, N. Y.
Frank McNay, Mauston, Wis.
W. J. Brown, Chard, Ont.
George W. York, Chicago, Ills.
W. Z. Hutchinson, Flint, Mich.
Geo. J. Spitler, Mosiertown, Pa.
Wm. McEvoy, Woodburn, Ont.
S. T. Pettit, Belmont, Ont.
W. A. Chrysler, Chatham, Ont.
R. F. Holtermann, Brantford, Ont.
Frank Benton, Washington, D. C.
Ralph Benton, Washington, D. C.
J. C. Lillibridge, Port Allegany, Pa.
R. McKnight, Owen Sound, Ont.
R. A. Marrison, Inverary, Ont.
F. A. Gemmill, Stratford, Ont.
E. E. Slingerland, Troy, Pa.
L. A. Aspinwall, Jackson, Mich.
Ira Barber, DeKalb Junction, N. Y.
Dr. A. B. Mason, Toledo, Ohio.
L. D. Stilson, York, Nebr.
E. Dickinson, Jr., North Glanford, Ont
J. W. Sparling, Bowmanville, Ont.
D. H. Coggshall, West Groton, N. Y.
Wm. Couse, Streetsville, Ont.
D. B. Lovett, Crestline, Ohio.

LADY MEMBERS PRESENT.

Mrs. Martin Emigh, Holbrook, Ont.
Mrs. H. J. Beam, Black Creek, Ont.
Mrs. E. H. Stewart, Niagara Falls South, Ont.
Mrs. Adam Garner, Niagara Falls South, Ont.
Mrs. J. K. Darling, Almonte, Ont.
Mrs. J. G. Sized, Scarboro Junction, Ont.
Mrs. H. E. Bliss, West Winfield, N. Y.
Mrs. W. J. Brown, Chard, Ont.
Miss Constance Root, Medina, Ohio.
Miss Carrie Root, Medina, Ohio.
Mrs. Wm. McEvoy, Woodburn, Ont.
Mrs. M. Rickard, Buffalo, N. Y.
Mrs. P. Byer, Markham, Ont.
Mrs. Anna L. Cowan, Dayton, Ohio.

LIFE MEMBERS PRESENT.

A. I. Root, Medina, Ohio.
Thomas G. Newman, Chicago, Ill.

HONORARY MEMBERS PRESENT.

Rev. L. L. Langstroth, Dayton, Ohio.
Rev. Wm. F. Clarke, Guelph, Ont.

Next came an essay by Mr. B. Taylor, of Forestville, Minn., entitled,

The Surest and Best Way of Producing a Crop of Comb Honey.

There have been poor honey crops here (southern Minnesota) for five seasons in succession. Six years ago we had the greatest crop on record, and for 25 years previous a good crop was about as certain as the seasons, provided proper industry and skill were used. Then there came a change. Minnesota had in all the years previous to 1889, been regularly blessed with abundance of rainfall in the growing season, and generally, with much snow in winter, farm crops of all kinds flourished; wild flowering plants struggled for room in every waste place, and the flowers were reeking with nectar. But for the last five seasons there has been a great lack of rainfall in the summer and fall months, vegetable growth was checked, and farm crops became less certain. The carpet of green that clothed our landscape in the fall months was turned to brown, often in the early months of summer. The white clover that lined our roadsides and pastures with silvery whiteness began to disappear more and more with each returning season; trees began to be scrimped in growth of leaf and blossom, until in the fall of 1894 stately oaks and other trees withered and died for lack of moisture. The honey crops began to wane, and the bees wintered with less certainty each year. Skillful apiarists that were able to still secure some surplus began to be the ones that had the "worst luck" in wintering the colonies, and the less skillful, who got no honey, became the most successful.

But now old-time conditions seem to be returning; good rains continue to come in regular order, the brown earth is being again clothed with a carpet of green and gold, and the colonies of bees are increasing in weight in a way that promises better times for 1896, for the apiarist, for the bees will now rear brood until late in the fall, and the hives will be stocked with *young* bees at cellaring-time that will not *die* of *old age* before young bees can be reared next spring to take their places; and the hives will also be well stocked with natural stores, so we need not be doctoring the colonies with artificial feed. I begin to fear that whenever we have to begin doctoring our colonies for *any* reason, trouble is not far away.

The outlook is, then, hopeful, and I have resolved to produce a big crop of comb honey in 1896, if life and health permit, and the present hopeful condition continues. If I succeed I will have to have my colonies strong in bees when white and Alsike clover blooms again, about June 1 next year, and I shall begin at once to utilize present opportunity to be *sure* to have the bees as I have already indicated.

I am quite certain I can winter with *certainty* in almost any kind of hive, provided it is filled with a *large* colony of *young bees*, and plenty of *natural sealed stores* at the commencement of winter, and I give intelligent care as to winter quarters; this I will give by putting my colonies into a dry, dark, well-ventilated cellar, and keeping them at a temperature as near 40° as possible. Each colony will be covered either with soft felt, sheeting paper, or a quilt of two or more thicknesses of burlap or cotton sheeting, and these fastened down tightly to the top of the hive (the cover being removed), so as to retain the natural heat of the bees, for I am now convinced, by repeated experiments, that the colonies should be covered *warmly*, even *in the cellar*. I will let the bottom-boards of the hives remain, but will have a wide entrance (the entire width of hive), both in front and rear, left open.

The bees will be put into winter quarters when real winter has apparently come.

I have some second swarms that came late; these will be at once supplied with heavy combs of natural stores, which I have in stock, regardless of the flowers yielding fall honey, for I want these young colonies to be stimulated to rear all the brood possible, and this they will not do if stinted for stores; the second swarms will make my best colonies for next year.

This fall I will give strong colonies all the supers of sections filled with full sheets of moderately heavy foundation; they will partly or wholly draw it out, and if any brood-chambers should be light in stores when these cases are removed, I will give them heavy combs of honey to make them *rich* in winter stores and spring food for rearing early the army of workers that are to gather a great crop of clover and basswood honey next year.

The sections of honey stored this fall will be extracted, and then set out some fair afternoon so the bees may clean them of every particle of honey. During the winter and spring the combs will be leveled to uniform thickness on a comb-leveler, and then returned to the section-cases with one of my slotted handy separators between each two combs, and then set in a proper place until 10 days before clover blooms next year, when I will put one case on each strong colony previous to swarming; in the cases the bees will have no combs to build, and they will fill them as *speedily* as a set of extracting-combs; the sections will have the comb built *solid* to them on all parts, the honey will be very white, and the combs the smoothest you ever saw. If I do not have enough drawn combs to hold my crop, I will use full sheets of foundation in sections to supply the deficiency, putting the sections with foundation in the *center* of the super, and drawn combs on the *outside*.

Next spring, as soon as there is a fair prospect that hard winter weather is passed, I will move my colonies to the summer stands. Each will be examined on the first fair day after they have had a good flight, to ascertain the amount of bees and stores, and to *know* they have a queen. The colonies will be in my handy hives of 10 frames of 100 inches each of *worker* comb, or 1,000 inches of straight worker comb per hive, and with not two square inches of drone-comb in any hive. They will be supplied with combs of honey if lacking in stores, united with others if queenless, and then covered warmly, and then left in quiet, unless something should call attention to some particular hive, when special attention will be given it.

After some of the colonies have become strong in bees, I will put an extra hive, filled with worker comb, *under* them; this doubling of hives will be done for experiment, to ascertain if this enlarging of brood room will give better results in comb honey than single hives; but the most of my colonies will be in single hives, and near the time white clover blooms, as has been mentioned, all strong colonies will be given a super of prepared sections, the section room increased as needed, by putting other cases under the partly-filled ones,

and swarming prevented, if *plenty* of *storing room* will do it, but no other means will be *tried* to prevent swarming.

When a colony swarms they will be hived in one of my small handy hives, on eight empty frames, with starters in them; only the two outside frames will be filled with dummies. This will reduce the hive to 800 inches of comb space. I will hive on the starters only, provided I do not care to increase my colonies, for I *know* I can get more comb honey by hiving in an empty brood-chamber, but if I should conclude I wanted to increase my colonies, I will fill the frames with full sheets of worker foundation on horizontal wires, so the foundation cannot stretch at the top and make drone-comb of it; for, with me, a large cell, however made, is sure to be filled with male brood, if any, and I cannot afford to rear drones in my small hives (they are equally unprofitable in large hives); but whether I use empty frames, or frames of foundation, the hive will be contracted to 800 inches of comb space.

The new hive will be set where the parent colony stood, the supers will be removed to it, the old colony placed on the vacant end of the double stand, with its entrance turned in the opposite direction, and the new swarm hived in the new

Mr. B. Taylor, Forestville, Minn.

hive, which will then be given all the cases of prepared sections they can fill until the end of the basswood honey season, near the end of July, when all the cases of sections will be removed to the iron honey-house, where the cases will be set on end with one inch of space between them, so the air can be circulated through them freely. Here they will remain some 60 days at a high temperature and plenty of circulating air, and the honey even in the uncapped cells will become so thick as not to leak, even if left lying on its side.

If I conclude to increase my colonies, the parent hive will be removed to a new stand the sixth or seventh day from swarming; this will reinforce the new colony, and increase the yield of surplus honey.

After the honey is properly cured it will all be crated in one grade only, and be of such quality as to stand No. 1 in any market. The crates will be made of light, clean, smooth wood and paper, and will not leak, and they will be so light that an empty 18-section crate will weigh but 2¼ pounds.

I have shipped honey prepared as above in 200-pound lots 700 miles, and with three railroad transfers, without breaking a single comb; but the big crop I am going to produce in 1896, I will sell by my own personal exertion, in my own local market, if possible. Past experience in this field has been such as to make anything in that line seem possible, for I have made peddling nice comb honey pay when every store was crammed with it, and no seeming market at any price. I expect to have to take a low price for honey in the near future, at least whether the crop is large or small, but I am going to deal directly with consumers, and give them the benefit of low prices. The sharks and speculators have captured all the public markets, have destroyed competition, and inaugurated a system of telling the producers of food what they will pay for things, and the consumers what they must give for them. Brother bee-keepers, let us, where possible, sell our goods in our home markets, direct to consumers.

B. TAYLOR.

Mr. Taylor's essay was then discussed as follows:

Ira Barber—I should not believe that bees would be comfortable at 40°.

Mr. Pettit—I think that temperature is all right. The only thing in his method of wintering that I would change is that I would raise the back end of the hive about three inches. The temperature *inside* the hive is above 40°. I have experimented much with different temperatures, and I believe that 40° is about right.

Ira Barber—Is your cellar dry or damp? That has much to do with it.

Mr. Pettitt—Until last year it was damp. The air was saturated with moisture. I can winter bees just as successfully in a wet atmosphere as in a dry one. When the air goes into the hive it is warmed.

Mr. Barber—With me the bees stop breeding early. No honey is gathered after July. Those old bees winter just as well as any. Bees that don't work don't lose their vitality. Practically, they are young bees.

R. A. Marrison—I don't consider that moisture has any bearing on the wintering of bees, if the temperature is right. If the bees are well protected, and the temperature about 45° to 50°, it doesn't matter about the moisture.

Dr. Mason—It does make a difference with me, whether the air is dry. My cellar is dry, and the temperature runs from 45° to 50°, and the bees are often hanging on the outside of the hive. But they are contented and quiet. Others say they want moisture; I don't. Some don't want the bees to breed early in the cellar. I do.

J. B. Hall—The bees that drop down on the damp cellar-bottom will mold. Put sawdust on the cellar-bottom, and the bees that drop down will dry up instead of molding. We leave the tops sealed down, but give plenty of ventilation to the hive.

G. M. Doolittle—First of all, to produce a crop of honey we need the man—one that will leave no stone unturned to produce a crop of honey. He must understand the proper kinks for bringing his bees up good and strong at the proper time.

Mr. Hall—First, we must have the flowers, then the man, the bees, and last a hive.

Mr. Pringle—First the flowers, then the bees. The bees may store a good crop of honey in a tree.

Mr. Doolittle—I once kept a section of honey three years, and it improved as the time went by. Honey must be kept dry and warm.

Mr. Barber—It is all right to keep honey dry and warm, but there is the trouble from the bee-moth's larvæ. I put a good, lively spider into each super, as I store them away, and it will take good care of all the moths.

R. McKnight—If honey is put into tight, well-made cases it will keep even in a damp atmosphere.

Dr. Mason—We have kept honey since the year before the World's Fair, and kept it nicely. It was kept in a closet off the sitting-room.

Mr. McKnight—I object to the word "sweat" as applied to comb honey. It does not sweat. It is the attraction and condensation of water from the atmosphere.

(Continued on page 629.)

Liberal Book Premiums are offered on page 627, for the work of getting new subscribers to the Bee Journal. It is a fine chance to get a complete apicultural library. Think of it—30 cents' worth of books given to the one sending a new subscriber! Remember, please, that *only* present subscribers to the Bee Journal can take advantage of that offer. The publishers of the Bee Journal believe in making it an object for the old subscribers to push for new readers among their neighbors and friends, hence the generous premium offers to them. It is hoped that all may begin *now* to work. Sample copies of the Bee Journal free.

A B C of Bee-Culture.—The new (1895) edition of this standard bee-book is now out, and a good stock of them is on hand, at the Bee Journal office, ready for prompt delivery. It contains over 400 pages, fully illustrated, and strongly bound in cloth. Every subject on bee-keeping is exhaustively treated. As over 50,000 copies of this great work have been sold, it needs no extended description here. Price, postpaid, $1.25, or clubbed with the Bee Journal one year—both for only $2.00.

Contributed Articles.

On Important Apiarian Subjects.

Packing Bees in a Shed for Winter.

BY C. E. MEAD.

I started to give the way I winter bees in a two-story brood-chamber, with four division-boards (see page 488), but I did not tell why I put the ¼-inch board over the 7¼ space before packing the spaces between the sides of the hive and division-boards. Well, I do not want to get any chaff in the 7¼-inch center space where I am going to put the frames of bees and honey. I use this board in packing the lower story as well as the second.

Second, I have never found anything that would keep division-boards exactly where wanted, with as little trouble as one screw and two nails to each board, as I described. If the hive-covers project at least two inches over the sides and ends of the hives, and have a drip cleat nailed on the under side at the ends and sides, no snow or rain will get in; and if raised ¼ inch, the packing will be as dry, as the cover is water-proof, and if a little snow does blow in, it will all dry out before it will melt to dampen the packing.

Correction: Read, I am as sure of wintering these small nuclei as I am the strong colonies under them. Why? They have only a 2x⅜-inch entrance through a wood tube, and are as warm as the big colony below, and make as big colonies by June 1.

To pack eight hives of bees in a shed: Lay three 16x1 foot boards on six solid level 2x4's edgewise, and nail. Have this run north and south, if possible On the west side toe-nail three 2x4's 3 feet high, and nail three 16x1 foot boards. Toe-nail three 2x4's, and 4 feet long, 2½ feet from the west side, one at each end, and one in the center. Nail a 1x4 inch to the tops of the east and west 2x4 inch. For a roof use four 16 feet by 1 foot by 1 inch; water-tight boards will do. The first will project over the west side 3 inches. Put on the others with 2½-inch lap over the lower board; nail up the ends of the shed.

You now have a shed, inside measure, 15 feet and 10 inches long, by 2 feet and 6 inches wide. Gradually move the hives around to the east side of this shed, the entrance facing the east, and in front of the exact position they are to be in the shed. Do this in September. Now is a good time to get them where you want them. Do not move them over 3 feet per day, less if they are near together now.

Make a bridge wide enough to go over the bottom-board, and 3½ inches high by 5 inches wide. Cover the bottom of the shed with old paper, the thicker the better. Now place each hive just 2 feet and 2 inches from the front of the hive to the back of the shed—space them equidistant, and raise the back of the hive, *if the frames are endwise with the entrance; if not, set level.* Put the bridges against the hives, and toe-nail the front ends. (A bridge for a 10-frame Langstroth is one board 1 foot and 6½ by 3 inches; and two boards 5x3 inches. Nail the 5x3 under and even with the ends of the 1 foot and 6½ by 5 inches, the 5 inches with the 5 inches.)

Now nail the first 16-foot board on in front, and resting on top of the eight bridged entrances of the hives. Fit in pieces between the bridges. Pack *between, behind,* and in *front* of each hive, even with the top of the board. Nail on another 16-foot board, packing as before. Now nail the third, and pack at least one foot above the tops of the hives.

N. B.—Bees winter better in a 2-story hive—heavy combs in the top hive, light ones below. Nail on a board to cover the open space at the top. Have plenty of honey, and do not unpack until you want to put on the surplus fixtures, or until they begin to swarm. Chicago, Ill., Aug. 23.

Why Do Bees Swarm?—Kingbirds.

BY ELIAS FOX.

As explained by Mr. Morrow, page 503, I am compelled to say with Dr. Miller. "I don't know," and I think Mr. Morrow would be just as near the solution had he, too, said "I don't know." The only portion of the solution that to me seems to be a fact, is this: Those that love the old queen must take her and leave. I saw something once several years ago that would look as if there might be something in this.

I always have my queens' wings clipped, and consequently I am, as a rule, present when a swarm issues, and this particular time a first swarm issued between 5 and 6 o'clock p.m., but no queen came, and of course the swarm returned. But before they were all in the hive, they swarmed again with the same result, and they returned the second time; but in a very few moments they again swarmed out, and they were all out of the hive with the exception of an occasional bee or two, when two bees appeared on the alighting-board pulling the queen with them, and off on the ground. One had hold of a wing and the other a leg. She was caged, and the swarm hived, and everything seemed perfectly satisfactory. This is the only case of the kind I ever saw.

Sometimes I find the queen out about as soon as the bees get fairly started; at other times, when about half out, and at other times she fails to appear at all, and on removing the cover from the upper story, I find her, apparently greatly excited, and ready to come out at once. This looks as if she was as anxious to leave the old hive as the bees. If she was not, after the bees are nearly all out, under the excitement that is always apparent at this time, what is to hinder her from destroying at least a portion of the unhatched queens, if she felt so disposed? It seems to me it would be very poor reasoning to think the bees should put forth so much effort to rear so many bees, and especially to stop to rear young queens before they could increase the supply of bees when the basswood honey would be harvested before the young queens would begin to lay.

Experience teaches me that bees swarm more for the want of room than from all other causes put together, and they don't always make this eight-day preparation, either, for I have had them swarm many a time without a sign of a queen-cell started; yet I find an occasional swarm that shows no disposition to swarm—they will fill every available corner in the hive, and unless given more room, they will spread themselves over the front of the hive and ground, as much as to say, "We have our house full, and are contented." Just why we have all of these different conditions, I think the best of us can say, "I don't know."

I can corroborate the statement of Mr. Nash, on page 504, in regard to kingbirds catching bees, for I have seen them catch hundreds of them, and it is always the incoming bees loaded with honey. I never saw the disgorging, but from his statement, and the fact of their not catching the outgoing bees, it would look as if they caught them for the honey alone. Hillsboro, Wis.

What Dr. Miller Thinks.

DRY BARRELS FOR HONEY.—It's worth while to repeat the injunction of Chas. Dadant, on page 581, to keep barrels for honey in a dry place. It seems so natural to think they must be kept in the cellar, and to think that a dry barrel will leak. Once I put some hot syrup into a tub. Next morning I found it all over the floor. The tub had been soaked with water, and hot syrup had such an affinity for the water that it drew it out, shrinking the wood so it would not hold the syrup. The honey does the same thing if the staves of a barrel are wet.

PRESERVING COMBS.—If salting down combs, as given by Mr. Golden, on page 582, will properly preserve them, it's a good thing to know. There may be times when it is convenient to protect them thus. Generally, however, it is best to let the bees take care of them. Each colony can care for three or four times as many combs as it needs for its own use. The only time when there need be any trouble is during the harvest when working for comb honey, for a colony will not work in sections if it has plenty of empty combs; but at that time the empty combs are likely to be used for swarms, or a few colonies can be run for extracted, each one taking care of 40 combs or more.

HOME-MADE COMB FOUNDATION.—The replies on page 595 seem to indicate that, like everything else, the making of comb foundation is being given over to specialists. Of those who reply, three buy for every one who makes, and some who formerly made now buy. I suppose the same thing holds with regard to other things used by bee-keepers. Formerly each man made his own hives and surplus boxes; now not one in a hundred makes hives, and not one in a thousand makes sections. It's better so. Marengo, Ill.

Every Present Subscriber of the Bee Journal should be an agent for it, and get all others possible to subscribe for it. See offers on page 627.

Something About the Old Skep Bee-Keeping.

BY W. H. MORSE.

Mr. Abbott invites all having experience with the skep (the name of the old straw hive) to speak out. And his remarks imply that the hive may have some good points in it after all. Now if I had more than one of these hives I should burn them, or otherwise get rid of them.

Before going farther, I will explain what the skep is, as there are thousands that never have seen one. It is made by forming a rope of straw without twisting it, one inch in diameter, and coiling it so that the coil measures 18 inches across, and each coil lying on the top of the other, and laced tightly to the one below until the coils reach 12 inches high, and then the coil is shortened at every round until it runs out, thereby forming a dome. Now such an arrangement, no matter how well it is done, has plenty of crevices for ventilation, and the bees fix it up to suit themselves, and they make no blunders about making it water-proof. We all know that straw is a bad conductor of heat or cold, and propolis is, as far as my knowledge goes, non-porous, which gives a warm hive in winter, and large, deep combs which are so essential to the perfect wintering of any colony, especially if wintered on the summer stands. Now, these are the good points of the old straw hive, but now for the bad points.

First, the bee-keeper is powerless over his colonies. Of course, such deep combs are perfect for the production of large quantities of brood, and the hive soon becomes densely populated, and excessive swarming is the result. I have known cases of five swarms in one season from the parent colony. Then, we see that the combs are 10 inches deep by 18 in the center of the hive, getting less in size as they near the outside, and the only support the combs have are two sticks thrust through the hive so as to cross each other, and the bees seem to realize the danger of breaking down such combs, for they thicken the outer ring of their cells much more than my bees do on the Langstroth frame. If wax were more valuable than honey, that would be all right. But we keep bees for the honey they produce, and with the skep hive the only way to profitably obtain it is by sulphuring the bees, and the combs generally are in the worst shape to get a fine quality of honey from them, even if they contain it, as they have had brood in patches all over them, and as a natural result pollen is stored wherever brood is being reared; but the sulphur pit is the worst of all, and in the hands of a man ignorant of the workings of the bees, it is awful. I will explain why.

First, the heaviest colonies were always doomed, which meant the best queens of the lot lost forever. Next came the ones that had not enough to pull through the winter, which meant the young laying queens of the season; and the ones generally left were the medium weight ones, which were generally the first swarms with the old queen at the head of the hive. So we see that the only thing that kept the bee-keepers of old from exterminating the honey-bee, was the God-given instinct to the bees to supersede the aged or worn-out mother; had it not been for this wonderful provision in their little brains, we should have known the honey-bee only from ancient writings. And if the nations of the world watched our American bee-literature as closely as theirs is watched in America, the skep and sulphur pit would be banished forever, and be read of as curiosities by future generations, as any person that can use a saw and square can beat the skep for a hive; but it is essential that every person managing a colony of bees in a wooden hive, should have a true knowledge of the principles of heat, and apply them to the bees he is managing in winter and summer, and then no one will regret having discarded the old for the new. Florence, Nebr.

The Alsike Clover Leaflet consists of 2 pages, with illustrations, showing the value of Alsike clover, and telling how to grow it. This Leaflet is just the thing to hand to every farmer in your neighborhood. Send to the Bee Journal office for a quantity of them, and see that they are distributed where they will do the most good. Prices, postpaid, are as follows: 50 for 25 cents; 100 for 40 cents; or 200 for 70 cents.

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year —both for $1.10.

☞ See "Bee-Keeper's Guide" offer on page 624.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Ordinance No. 30.—BE IT ORDAINED BY THE BOARD OF TRUSTEES OF THE INHABITANTS OF THE VILLAGE OF FAIRFAX, AS FOLLOWS:

SECTION 1. No person or persons shall keep, permit or maintain bees inside the corporate limits of the village of Fairfax, and it is hereby declared a nuisance to keep or maintain bees inside said corporate limits.

SEC. 2. Any person keeping or maintaining within the corporate limits of this village any nuisance as hereinbefore described, shall, on conviction thereof, be fined in the sum of not less than one dollar ($1.00), nor more than one hundred dollars ($100).

SEC. 3. This ordinance to be in full force after its approval.

Approved this 2nd day of September, 1895.

F. E. RUDDELL, *Chairman.*

ATTEST: G. SEIDEMAN, *Clerk.*

And now it is in Missouri where the city government has gotten to know "more than the law allows." I should like to get at the "Honorable Board of Trustees of the Inhabitants of the Village of Fairfax," Missouri, in body assembled, for about one hour, more or less. I trust that some of them would know some things, at the end of that time, which seem to dwell very faintly, if at all, in their craniums at the present time. I think it well that all such ordinances should be published, that bee-keepers may know what to expect, and be prepared for it. I want to offer this hint to bee-keepers, especially in towns and villages. Insist on giving in your bees to be taxed the same as any other property. The tax will not be much, and then when they confront you with such an ordinance, simply say:

"Gentlemen, my bees are *property*, and you cannot declare them a nuisance as a whole any more than you can horses and cattle, if kept in the proper way on my own premises. If you go to fooling with my bees, some of you will get into trouble. If you will *prove* that my *special bees* have committed a nuisance, then I will move them; but if you do not, you would better have a care how you fool with me or them."

It is about time that city aldermen and village trustees learn that they are not above the *law* and the constitutional rights of individual citizens. The right of *property* is older than any set of village trustees, and the sooner they are made to understand this, the better. They tried the moving-out business on me once in St. Joseph, but I read the riot act to them, and gave them a short chapter of the law and gospel combined, and I have not heard any more of it since, and the presumption is I will not, as this was several years ago.

Mr. Joseph Blivens, of Fairfax, seems to be the party against whom the above ordinance is directed. If any of our bee-keeping friends, who are near him, can lend him any aid in his fight for *human liberty*, it is to be hoped that they will do so.—[If Mr. Blivens is a member of the National Bee-Keepers' Union, he can get plenty of help.—EDITOR.]

Canadian Beedom.

The Importance of Longevity in Bees.

It is somewhat surprising that this quality is so seldom given any prominence by writers in our bee-journals, when upon it, to a very large extent, devolves the interesting question of "profit or loss" in bee-keeping. That it is of such vital importance may be denied by some of the "older heads" and "bigger lights" in bee-culture, but no one is bound to coincide with the opinions held by others when such opinions

appear to him to be false; but I am glad that I can say, as far as my experience goes, that there are few classes of men more anxious to adopt progressive ideas and methods of work than are bee-keepers. And I have no doubt that if I succeed in focusing a little more light on this neglected issue, greater and keener minds will push the matter further, and give us more knowledge of it.

Before all our theorizing began, and after it is all settled (if it ever will be), the fact remains that the colony of bees which gathers the largest surplus during the honey-flow, and consumes the smallest amount of this surplus in maintaining the hive between or after the honey-flows, is the most profitable one, and therefore the one to breed from; but in order to intelligently set about our work of breeding up bees to their highest standard of excellence, we must know what qualities in the bees stand first in the make-up of a first-class honey-gatherer. And now I would tell you a few facts—*not* "theories"—that were presented by a colony in my apiary, and first compelled my attention to the great value of longevity in bees.

This colony had only 6 frames of brood (frames 11x12 inches) at the beginning of the honey-flow, although there seemed to be a good average population of workers; and during the honey-flow I noticed that the queen did not seem able to increase that amount, so I thought of replacing her with one more prolific, but before doing so I noticed that this colony was storing as much honey as the colonies which had 9 to 11 frames of brood, so I began to think they must be great workers, and I took notice of them early in the morning, only to find out that they were not the earliest by many in getting off to work, nor did they appear to be doing a "rushing" trade any time in the day—just working away, steady, without very much show around the entrance, and this puzzled me a little until I began to think if these bees were longer lived than the average bees, that would explain their surplus and their strength for so small an amount of brood. That queen is now 3 years old, has never swarmed, but her colony is almost always crawling ahead when others are doing nothing. And after paying particular attention to her for the last two seasons, I can see where their great advantage is.

If 6 frames of her brood gives a working force equal to 8 or 9 frames of another queen, then that colony has saved the labor, the honey, and the pollen necessary to rear the three extra frames of brood, and the labor saved the bees is, I think, a very important item, for it is well known that the less brood bees are rearing, the more slowly are they ageing, other things being equal; and this saving tends to still further lengthen their time of service as field-workers (the bees that pile the honey in). But these three things are not all that is saved. Long-lived bees have less brood to keep *warm* to produce a given force of workers, and heat is a very valuable commodity in the hives in early spring. Then there are the extra combs that may be used for extracting, and a queen-excluder proves to be a useless article when the queen cannot under ordinary circumstances be induced to leave the bottom story. But these two items are only slight advantages—here is one of the greatest: The small amount of brood for the size of the hive, tends to discourage swarming more than any other one thing I know of. And, lastly, longer lived bees do not slack off brood-rearing so quickly as others, as the working force is large in proportion to the brood, and so a smaller honey-flow suffices to keep the queen laying to her full capacity; this leaves the colony in better condition to begin storing a surplus from any little flow that comes along.

Now let us see what it all amounts to: To produce a given maximum force of workers, less honey is needed, and less pollen, less labor, less heat; consequently a colony attains its full strength earlier in the season, and more surely, no matter what the weather is like, and is better supplied with stores than others shorter lived, and when it *is* there it stays there at less expenditure of bee-force.

I suppose one is ready to rise now and say, "Why, but you are almost taking it for granted that long-lived bees are not prolific." No, I am not; it is possible that a queen may be prolific, and her bees long lived, too, but Dame Nature has a way of squaring accounts that scientists designate as the "law of compensation," and when left to herself she generally takes away something when she adds an advantage to anything, and it is not her custom to put "length of days" and "many children" in the same hand, not even when she is dealing with her favored children, "the bees;" but she occasionally "sports" a little, and she seems more ready to sport with bees than with many other things, and I am confident that we can combine longevity and prolificness with less trouble than it took to produce the useless, but beautiful, five golden bands; but if we can't, let's have longevity first, by all means; for there is pretty good evidence that the instinct that primarily induces the bee to leave the hive in quest of nectar and pollen, is equally strong in all bees, and under similar conditions in the hive nearly all bees would bring in about the same amount of nectar; and the important factor is, what use will they make of it?

Weston, Ont. GEO. J. VANDEVORD.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

A Word to Inquirers.

Please don't send me any postage stamps. When you pay your dollar to the American Bee Journal, that gives you the right to bother me with all the questions you like, without enclosing any stamps.

And don't send a stamp expecting an answer by mail. I'm almost ashamed to refer to this so often, but there are still some who prefer to have answers by mail, and feel that a stamp enclosed entitles them to such reply. Just think for a minute. If one has a right to such reply, then all have, and it would take the greater part of my time writing letters for which I would receive no compensation. I like to be obliging, but I think you will see that would be carrying the thing a little too far. Besides, when an answer goes into print, then others besides the questioner get the benefit. So when you send a question, be sure to say in what paper you want the answer printed, and give your name and address (not to be printed unless you wish), and I'll gladly answer as well as I can. C. C. MILLER.

Removing Filled Sections—Placing Hives.

1. Is it prudent to remove filled sections from among partly filled, that have been so for six or seven weeks?
2. How far from the ground should the hives be placed?

H. R.

ANSWERS.—1. Yes, after sections are finished it is best to get them off the hive, for they will lose their snowy whiteness if left on longer. If the bees are still storing, the partly-filled sections can be put together and returned for the bees to finish.

2. My hives are just as close to the ground as the shallow stands will allow, maybe 4 to 6 inches. Then when laden bees fall on the ground, they can crawl in without flying. In some places, however, ants are so troublesome that hives are raised.

Brace-Combs in the Sections—A Sample of Honey.

I have a colony of bees that are very bad at building brace-combs in the sections. They are hybrids, very gentle, and good workers. I am using section-holders and wood separators. Would it make any difference if I were to use tin separators? If you will kindly advise me through the columns of the American Bee Journal what to do for this colony of bees, I will make you a present of a pound of honey, and hope to hear your opinion of the quality, flavor and "workmanship." If it puzzles you to tell what it was stored from, I will cheerfully give you further information. I call it No. 1 honey in all respects, and I hope it will not get smashed up on the road. A. P. G.

McMurray, Wash.

ANSWER.—If you had waited until you got my answer, I'm a little afraid you wouldn't have sent the honey in payment, for I'm not sure that I can help you out. Tin separators may not be built to quite as much as wood, but I shouldn't count on much difference. I wonder a little whether there may not be some difference in your treatment that causes the trouble. That is, if other of your colonies are free from the trouble. Sometimes a colony will be induced to build brace-combs in sections by being much crowded. The obvious remedy is to give more empty sections. Possibly the whole

trouble may be a peculiarity of that colony, in which case it may be well to confine their work to extracted honey, and avoid breeding from them.

The section of honey sent was of course broken by the express company, but they must have exercised a good deal of ingenuity, for it was so carefully packed that it would hardly seem possible to break it. It was left, however, sufficiently whole to allow it to be seen that it was A 1 in appearance, very light in color, of excellent flavor, only some might think the flavor a little too mild. The comb seems remarkably tender. I'm not an expert at judging honey, but I think the sample is something new to me, and I shall be glad to have you tell us what it is.

Changing Frames—Perforated-Wood Separators.

1. I am about to change the frames in all my hives (Langstroth) to a larger size. What standard frame is there, which is the same size as the Langstroth but deeper?

2. I shall also modify my supers by laying aside section-holders. I will continue to use wood separators, but have them perforated with holes ⅜ of an inch in diameter, and ¼ inch apart. Has this sort of separator been used, or anything on this order? Now, I'm not after a patent, but if there is any marked advantage to the bees, by the use of this kind of separator, or anything like it, I desire to find it out.

M. L.

Answers.—1. Some bee-keepers make frames 17⅝ inches long, and deeper than 9⅛, but I don't know of any standard in the matter, each one having his own ideal.

2. I don't wonder greatly at your laying aside section-holders, but I wish you would tell us why, and what you have found better. As to the separator you have in mind, there seems good reason at the bottom. The idea is that a separator is in the way of the bees, hindering their work, only if no separator is present they'll make crooked work. Now, if we can give them something that will oblige them to make straight work, and still allow free communication, we will have the advantages without the disadvantages. A good many others have had this same thought, and it will be very hard for you to get up a separator not previously conceived and tried. A wire separator has been patented, I believe, and different wood separators have been made with passage-ways. I think none of them have been a great success, and you better try it on a small scale.

Black vs. the Yellow—What Made the Difference?

I bought 18 5-banded Italian queens the past summer, and I introduced all but two without loss. I bought two full colonies last fall, and one of them gave two good swarms last spring, and the other did not swarm at all; and the worst of all, I have 20 full colonies of the 5-banded bees, or the golden; I have some yellow all over, and some black bees yet, and I have been getting honey from the black ones, and none from the Italians. What is the cause? I think I have gone a step too far with the yellow bees. I want some good honey-gatherers, too.

I have 28 full colonies now, all in the 8 and 9 frame dovetail hives, all in good condition for winter. I had to transfer 17 of them last spring from the box-hive to the dovetail hive. I did it without loss. I put the best straight combs in the frames, and in the rest I put full sheets of foundation. I have given my bees all the care a man could, and I want to keep them for profit, if there is any in them. I run for comb honey. My average crop was 20 pounds each from the 10 black colonies, and not a pound from the 20 Italians. They fly stronger than some of the blacks, but don't bring in the honey, and they are bad to rob, sure enough—worse than blacks, I think. I have had about enough of the so-called 5-banded bees. I want the best honey-gatherers. Which are the best?

C. R. R.

Harden, N. C., Sept. 2.

Answer.—If your bees all had the same care, it seems a pretty clear thing that at least for you the black bees are better than the yellow ones you have. There is great difference of opinion as to the value of the very yellow bees, and I suspect they are not all alike, some being much better than others. I should advise a trial of the regular 3-banded Italians, and if you find they don't do any better for you than the 5-banders, then work back into the black blood.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—Ed.]

Several Notes by the Way.

Ripening Honey.—There is copied, on page 508, from the Rural Californian, an item by Prof. Cook in regard to the ripening of honey. Prof. Cook is quoted as saying that the bees "wait until the evaporation is sufficient to make the honey of such thickness or 'body' that it's in no danger of souring or fermenting after being sealed." Do they, always? I have just extracted from some combs which were sealed half way or more from the top. The honey not yet capped was thick and well ripened, while that which had been sealed was thin, and in a state of fermentation.

Keeping Grass Down.—Dr. Miller, on page 509, in speaking of keeping the fronts of the hives free from grass, says salt is good for that purpose, but that he prefers a board. That is probably all right in the North, but here, where we are afflicted with ants, the board would only furnish a handy place of refuge for these pets. By the way, I find that gasoline will destroy ants and their eggs instanter, if sprinkled upon them. This is of use where a nest is found in some place in which it is not advisable to burn it—and the gasoline is at hand.

Sweet Clover seems to thrive on our low hammock soils, rich, dark looking land, but will not do on the light or higher grounds.

Basswood grows in this section, near the 28th degree north latitude, but as it is said to yield well only after severe winters, I would prefer to do without honey from that source.

Puzzling Actions.—Bees are often a puzzle in their actions. I have a nucleus in a 10-frame hive. They have eight full combs, one frame of foundation, and one frame with an inch starter. They have just begun to draw out the foundation. This colony has for some weeks been building queen-cells. Several times the cells have been capped over, but each time destroyed by being opened on the side. Still the cell-building goes on. This colony has been increased from a 2-frame nucleus, as I found they needed room. Nothing appears to be wrong with the queen—she is but a few months old, and there should be no reason for swarming, with a light honey-flow and plenty of room.

The Honey Crop here will be light, unless the fall flow brings up the average. There has been a profuse bloom in many cases, but the yield of honey was scanty.

Holly Hill, Fla., Aug. 11. C. S. Harris.

Bee-Tree Troubles.—As showing the value of a bee-tree, in the opinion of a Michigan law court, the following is given from the Muir (Mich.) Tribune:

Ed. Crone's trial for the offense of cutting a bee-tree on W. H. Kimball's farm resulted in his conviction. Justice Bennett sentenced him to pay a fine of $1.50 and costs, amounting to about $30 in all, or 30 days in jail. He couldn't raise the money, and his only alternative was to go to jail.

Honey as Food and Medicine.—A new and revised edition of this 32-page pamphlet is now issued. It has 5 blank pages on which to write or paste recipes taken from other sources. It is just what its name indicates, and should be liberally distributed among the people everywhere to create a demand for honey. It contains a number of recipes on the use of honey as food and as medicine, besides much other interesting and valuable information. Prices, postpaid, are: Single copy, 5 cts.; 10 copies 35 cts.; 50 for $1.25; 100 for $2.00. Better give them a trial. Send all orders to the Bee Journal office.

Now is the Time to work for new subscribers. Why not take advantage of the liberal offers made on page 627?

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George W. York, - - Editor.

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Editorial Budget.

Mr. A. W. Swan, of Centralia, Kans., has sent me a 6x8 inch photograph of his nice apiary of 42 colonies. Mr. Swan himself, and daughter May, are also shown in the picture.

Mrs. A. A. Simpson, of Swarts, Pa., took 1st premium on honey recently at their Fair. Many will remember having seen Mrs. Simpson at the World's Fair bee-convention. She's one of Pennsylvania's prominent bee-women.

Mr. J. T. Calvert, business manager of Gleanings, wrote a good share of the editorial matter in that paper for Sept. 15. I don't think he need take a "back seat" for any one when it comes to doing an editor's work. His paragraphic comments on the Toronto convention are exceedingly well done. But may be it takes a real Canadian to do justice to a Canadian gathering.

Only One Cent Per Copy will take the numbers of the Bee Journal that we have on hand dating *before* Jan. 1, 1895. We have quite a lot of them, and running back for perhaps 10 years, and rather than make waste paper of them, we offer them for only one cent each. Not less than 20 copies (all different dates) will be sent to one address. That will be only 20 cents (stamps taken). They are odd numbers, and the selecting must be left to us. All are just as good as new.

A Standard Bee-Book is to the bee-keeper (and especially to the beginner) just what a good cyclopedia is to the student at school or in business. Both should be used as books of reference when the meaning of something seemingly misunderstandable comes up. Of course the bee-book should be thoroughly read, or studied, and used in connection with actual practice in keeping or caring for bees. While book knowledge is excellent, information gained by studying the things themselves in nature is especially important. But when you use experience in the apiary to corroborate what the bee-book says, then greatest advancement toward success is made. They should go hand in hand.

A good bee-book is necessary, even if you are taking one or more current bee-papers. There is much condensed in book form that has been published over and over and again in nearly all the bee-periodicals, and which can be repeated less and less frequently by reason of the new subjects constantly arising, and which claim the larger share of space in live periodicals. So beginners, especially, should not expect to find everything in any or all the bee-papers, but should possess one or more of the standard books on the subject of bees, and read them in connection with the bee-papers.

While there are many books that cover the ground of scientific and practical apiculture, none do so quite so thoroughly and completely as Prof. Cook's "Bee-Keepers' Guide;" "Langstroth on the Honey-Bee;" and Root's "A B C of Bee-Culture." The price of the first and third are $1.25 each, and the second $1.40. All or any of them can be had at the Bee Journal office. (See page 627.)

A New Chicago Branch for the sale of bee-keepers' supplies has just been opened by The A. I. Root Co. They have purchased the good-will and stock of goods of Thomas G. Newman, who has been dealing in bee-supplies in Chicago for 20 years. Mr. Newman thus retires from the field, and The A. I. Root Co. begin their new branch here, at 56 Fifth Ave. They have arranged with the editor of the American Bee Journal to manage their business for them. He will endeavor to see that orders are promptly filled, and that all who prefer to have goods shipped from Chicago receive the best treatment possible.

The American Bee Journal is in no way connected with the bee-supply business by this new arrangement—it will continue to be as at present, entirely independent, and aim to advance the best interests of bee-keepers everywhere.

Convention Notes.

There are several more matters connected with the Toronto convention of the North American of which I wish to speak.

First, I want to say that I was so delighted to meet the Rev. L. L. Langstroth, the honored Father of American bee-keeping. I had never met him. On Wednesday morning, Bro. Hutchinson kindly introduced me to him. He simply took my hand in both of his own, and said "God bless you, Bro. York!" This was before he had his breakfast. About an hour after, I saw him seated in the hotel parlor all alone. I thought, "Now's my chance to have Father Langstroth all to myself." I entered, and I just had a blessed time with him for about two and a half hours. Oh, the sweetness of his splendid voice! Oh, the wonderful command of language he has! He never lacked for a word, but it was one continuous stream of mellifluous eloquence. And all through his conversation he threw in bits of such appropriate poetical quotations that I was simply enraptured.

I was surprised at Father L.'s clear memory, and he's nearly 85 years old! Why, it seemed as if I was in the very presence of the first editor of the American Bee Journal, when he described him to me—the lamented Samuel Wagner. I felt that Father Langstroth was a sort of golden link that completed the chain connecting myself with my worthy predecessor, the founder of this journal. How I wished I might more nearly fill the editorial chair which he (Mr. Wagner) occupied with such conspicuous grace and ability some 30 years ago. But, alas, all men are not great. Still, we can all do our best, which probably is all that the most noted of the past did.

One instance of the grand character of Mr. Wagner, I will take space to give here, as nearly as I can remember, though of course not in Father Langstroth's inimitable style: Mr. Wagner was a thorough German student, though American born. Up to the age of 23 years he had not learned the English language. He was wonderfully familiar with German literature, and particularly with that relating to bee-keeping. He knew all that was known on the subject of bees in Germany, and when Father Langstroth met him he had gone so far as to have made a fine translation of the foremost

German bee-writings which described a hive and system of management quite unknown to English-speaking American bee-keepers, and which he thought promised to revolutionize the bee-industry in this country. But Father Langstroth was working, too. He had just begun to write his matchless work —"Langstroth on the Honey-Bee." He sent some of his manuscript to Mr. Wagner, and when he read it he was so captivated and pleased with it that he suppressed his beautiful translation of the German work, and wrote Father Langstroth that his (Father L.'s) hive and system were far in advance of the German invention. Mr. Wagner was ever a true friend and brother to Father Langstroth, and aided him in every way within his power. Such was Samuel Wagner the tireless scholar, the peerless translator, the thorough bee-master—yes, the great first editor of the old American Bee Journal.

I must say a few words about Father Langstroth's widowed daughter—Mrs. Anna L. Cowan. She accompanied her father to Toronto to care for him. What a pleasure it was to meet her. She it is who has for years looked after Father Langstroth. All through his long suffering from head-trouble, she has cared for him, though she herself had seven children to "mother." Such tender, unselfish devotion I feel merits more than I can here express. I am glad to have this opportunity to thus speak of her to the thousands who love to honor her esteemed father—the apiarian world's greatest benefactor.

Among the many whom I had never had the pleasure of meeting, was Mr. Doolittle, of New York. I had pictured him as a rather dry sort of man, and not possessing a joking or fun-loving spirit My, but wasn't I mistaken? Why, he's simply bubbling over all the time, and has such a jolly nature that one feels good all the time when with him. His address before the convention was simply immense. He had no manuscript, but spoke "off hand," as it were. I would like to tell some of the good things he said. I wish he'd transfer to paper the best parts of his address. It surely ought to be published. It was sound advice, I can assure you—just like he always writes in his bee-articles.

Quite a number of the Canadian bee-women were present —wives of prominent bee-men, mostly, though I imagine a good many of them are expert in handling bees. I know Mrs. E. H. Stewart, of Niagara Falls South, Ont., is such an one. She doesn't say anything publicly, but she has an "experience." I wish she'd tell it. It might encourage others of our bee-sisters. Mrs. Stewart was one of the very few Canadian bee-women who attended the World's Fair convention.

Hon. Eugene Secor and Dr. Miller got their heads together again before the Toronto meeting, and "concocted" just the finest "Convention Song" I ever heard. It wasn't issued in time to be learned before the convention, but after the afternoon session on Thursday Bro. Calvert and I worked up an amateur quartet at the Palmer House, and learned the song so that we (or I) could at least "sing at it," and the evening session of that day was opened with it. After we finished the last stanza the whole audience clapped their hands a whole lot. I wonder if they were glad we had finished it! It's a fine song, any way, and all should learn it before the next meeting. Oh, I almost forgot to say that the new bee-keepers' quartet was composed of the following: Tenor, Mr. J. T. Cavert; alto, Miss Carrie Root; bass, Thomas G. Newman; and the would-be soprano—your humble servant. The first three did well, I know, for the Hon. John Dryden, in his eloquent address of welcome, referred to the song several times.

Did you know that Dr. Mason is "a close second" to Hon. Chauncey Depew, the noted after-dinner speaker, of New York? Well, you'd have thought so if you had heard his impromptu response to Mr. Dryden's welcome address. To me, it was one of the pleasant surprises of the convention. Dr. Mason could almost have a convention alone. He does like to "talk in meetin'." But as he always says something," he's a handy kind of man in a convention.

I might go on almost indefinitely with these "notes," but possibly the foregoing, with those of last week, will suffice. There are others that no doubt deserve special mention, but they will likely be heard from in Secretary Hutchinson's report of the proceedings now being published in these columns.

In conclusion I may say that I had a very pleasant 17 hours' return journey, with Mr. Newman as my traveling companion, arriving at this office about 8 a.m. Saturday, Sept. 7—just in time to help get out the next week's Bee Journal "on time."

Cause of Honey Crop Failure.—In the Farm, Stock and Home, for Aug. 15, Mr. B. Taylor, of Forestville, Minn., explains the cause of continued failures of the honey crop, and his unceasing faith in the future, in these paragraphs:

How is the continued failure of the honey crop to be accounted for? Has Nature permanently set her face against the "little busy bee" and her owner? No, our faith is not in the least shaken; that those that hold out faithfully will yet reap the reward of those that "hold out to the end."

The cause of this continued failure in the surplus honey crop is, to our understanding, plainly due to the one cause—*drouth*. Mother Nature is not always going to withhold the timely rains. We have now had at least four seasons in which there has been a dearth of rain in the growing season. Clover and other honey-yielding plants have not only been badly killed out, but where not killed have been so weakened in vitality that they failed to secrete nectar. The same is true here of basswood, for, in this section at least, the basswood trees are scant in foliage, and the few trees that bloomed did not yield honey as of old.

But we believe the rule of timely rains has come again, and the big springs, of former years, that had nearly ceased to flow (in fact, had ceased in many cases) show an increased flow. The brown pastures and roadsides are being clothed with green again, and this hopeful condition is having its effect upon the bees, and swarming, which has been suspended for some time, is being renewed again, as a big prime swarm, that came while we were writing this, proves. This indicates that the bees are gathering honey, and others will no doubt swarm. We are not pleased to have these late swarms, but yet are pleased with conditions that cause them, for they would not swarm unless honey was being gathered freely.

Among the Bee-Papers

Gleaned by Dr. Miller.

LAYING WORKERS.

Laying workers sometimes make just as nice and smooth work as queens, filling worker-cells regularly with one egg in a cell, with no difference that I could detect. But I think it is generally, if not always, in cases where no drone-cells are present, and generally a queen-cell with two or more eggs will tell the story.—Stray Straws.

UNITING COLONIES OF BEES.

Doolittle, in Gleanings, gives the following as one plan of uniting when the colonies are not very small, and it is not late in the season:

Having decided that certain colonies are to be united, the first thing to know is, which of the two or three, as the case may be, has the most valuable queen. Having ascertained this, I hunt out the poorest one and kill her, then leave them from two to six or eight days, according to the weather and pressure of business.

When they are to be united, I take the hive or hives, from which the queen has been killed, to the stand of the one they are to be united with. I now select from each hive the frames having the most honey in them, to the number I wish to winter them on, and set them in one of the hives, alternating them as they are set in the hive. In moving the bees they are first smoked thoroughly from the entrance, when they are

jarred by placing the hives on a wheelbarrow in no gentle manner, and wheeling them rapidly to the place they are to stand, first having confined the bees to the hive, and doing the whole on some dark, cloudy day when the bees are not flying, which causes them to remain on their combs much better in handling them than would be the case were they not thus disturbed, so that, in the process of uniting, very few bees take wing in comparison to what otherwise would, and these few are so bewildered that they immediately go with the others into the new hive, or united colony, as the fanning of wings and hum of the bees calls them, saying, "A new home is found."

Having the hive full of combs containing the most honey, I next shake the bees, which are on the remaining frames of combs, off at the entrance, taking one frame from one colony, and the next from another, and so on, so as to mix the bees up as much as possible. When all the bees are inside of the hive, the work of uniting is done. Remove the hives, bottom-boards and all, from the stands occupied by any of the united colonies previous to this, and no loss of bees will occur. What few bees go back to the old stands upon their first flight after this, return after finding their old hives gone; also the mixing up and jarring process spoken of above causes them to mark their location anew, the same as does a new swarm, or when the bees take their first flight in the spring.

LINDENS ON STREETS.

R. F. Holtermann says lindens planted in the streets are rarely of benefit to bee-keepers, but must be in the woods to be of much value. I wish that might be numerously contradicted. [That is not true around Medina, nor in any other place I have been in the United States during the bloom. I have a row of trees in front of my house that are the equal of any trees in the woods for the roar of bees at the proper season of the year. Of course, basswoods do better in the woods; but that those along the streets are rarely of benefit to bee-keepers is not true with us.—Ed.]—Stray Straws.

LARGE COLONIES FOR HONEY.

As has been previously the case, the large colonies of two and three 8-framers did altogether the best in honey. Colonies occupying two 8-frame stories generally filled both of them. In some instances they filled two stories, or a story and a half, with surplus extracted honey.—Gleanings.

TAKING MORE THAN ONE BEE-JOURNAL.

In our last issue I made such extended comments on the Bee-Keepers' Review that I was really afraid the other journals would think I could see no merit elsewhere. How often have I felt that, instead of making extracts and comments, I should like to publish over again whole articles of the other bee-papers! But that is impossible; but it is possible, with a great majority of our readers, probably, to make a selection of at least three, and buy them at club rates. But, you say, money is scarce. When it has often happened that a single item in any one of the papers has saved the reader *dollars*, can you, dear reader, afford not to take them? Bee-journal editors can scarcely be called rivals. With hardly an exception they "bee" brethren.—Editorial in Gleanings.

If all would agree with Ernest, it might save a good bit of wear on my shears every week.

SWEET CLOVER.

Notwithstanding the loss of white clover, I think I shall be able to report an average surplus of extracted honey this year, of not less than 50 pounds per colony, spring count. This surplus is mainly from basswood and sweet clover—about as much from one as from the other. This is a small average, as I ought to be able to report an average of at least 100 pounds surplus per colony from sweet clover alone. I think I could do this if I could control the crop. The crop, as a honey-plant, is destroyed in this locality in two ways—by mowing and by pasturing. The city authorities here mow it down along the streets. This, of course, they have a legal right to do. But as they do not confine their work to sweet clover alone, we honey-producers have no right to complain. And the farmers are busy also in destroying sweet clover as a honey-plant. They have found out that their cattle will eat it; they therefore turn out their cows to pasture upon it when they are short of feed on their farms. They hire a boy to herd their cows and keep them within proper bounds. The cows will eat the plants even after they come into bloom, and when from 4 to 6 feet high. Some farmers make it a practice to cut it before it comes into bloom, and haul it to their hogs. The plant is then so succulent that hogs will eat it readily. Those who have used it in this way regard it as of great value for hogs alone. There are some farmers here who contend that it will pay to grow sweet clover as a regular farm crop, especially for hogs and cows. If we have many more dry summers they will be driven to it, for sweet clover is one of the crops that will make a satisfactory growth without regard to dry weather.—M. M. Baldridge, in Gleanings.

For my part, I'm glad to know that stock cut off some of the bees' chances, for that means in time a greater increase.

CRIMSON CLOVER.

I sowed about 20 acres to crimson clover in August, 1894, about the 12th. Sowed about five quarts to the acre. The land was planted in corn. As to cultivation of ground for seeding I used a one-horse spring-tooth cultivator, spread it wide enough to take a balk. I sowed a part of the seed before cultivating, and a part after cultivating. Could not discover any difference in the stand, or growth of clover. It made an immense crop, very thick on the ground, and was over two feet high when plowed under about May 15. I never saw such a crop of anything turned under.

I planted the ground to corn, got it all planted by June 1. The corn has made a wonderful growth, looks black and rank. I am so well pleased with the results of crimson clover that I expect to sow 60 acres this season. Many farmers who have watched the growth and results of this field of crimson clover, are now arranging to sow some this season. This clover is fast getting a foothold in America.

We see much nowadays about what is the best brand of commercial fertilizer. Did you ever think, brother farmer, what amount of money leaves your neighborhood for fertilizers? I do not wish to condemn the use of these fertilizers, but would it not be much better to use a plant that will collect fertilizer from the atmosphere with but little expense, and, at the same time, build your soil up? We, as farmers, must watch our business, and profit by practical experience. What gives me good results on my land may not be the proper thing to give you the results desired. Soil, climate, location, etc., govern these things to considerable extent. But watch crimson clover—what it has done, and what it will do, for the farmer. —Geo. T. Leatherman, of West Virginia, in National Stockman and Farmer.

SOME GOOD RURAL BOOKS.

How We Made the Old Farm Pay, is the title of a book (64 pages) by Chas. A. Green, giving his personal experience on a fruit farm which he made yield a generous fortune. It is bound in elegant lithographed cover, printed on fine paper and beautifully illustrated. It gives much practical information in regard to fruit-growing, and also gives the author's experience as a Nurseryman. Price, **25 cents.**

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How to Propagate and Grow Fruit.—This book (72 pages) gives brief instructions in budding, grafting and layering. It also gives almost every method known for the propagation of fruit trees, vines and plants. There are many people who could increase their stock of valuable varieties if they could secure information on this subject. Money can be made by purchasing rare and valuable varieties, and increasing them rapidly by layering budding or otherwise. This little book by Chas. A. Green tells how to do it. Price, **25 cents.**

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General Items.

Making Honey a Staple Product.

Editor Hutchinson speaks in the last Bee Journal of honey being a luxury, and not a staple like wheat or potatoes. Now, why cannot people be educated up to where they will believe it to be more a necessity than a luxury, for it is surely the purest of all sweets? Housekeepers believe fruit, both fresh and canned, to be a necessity, and those of us who are fortunate enough to live in northern Illinois, where scarcely any fruit is grown, must either buy the stale fruits in the market or go without. Now, would it not be greater economy, and more healthful, if we fed our husbands and children on more pure honey—the richest and purest of all sweets—and less on the stale acid fruits in the markets? Who will say no? ADELLA NEWELL.

Dundee, Ill., Sept. 2.

Apple-Bloom and Locust Honey.

My bees wintered well, and the first of May found all colonies strong in bees ready for apple-bloom, which yielded well. This was followed by black locust. From the two sources I got between 400 and 500 pounds of good surplus honey, or about 25 pounds per colony, which finds ready sale at 20 cents per pound for comb honey, which is rather dark, but of good flavor. We had no white clover or other honey.

My colonies all wintered on "honey-dew." They have plenty of honey for the coming winter. My success is due to the fact that I have *all* my colonies *strong* in *young* bees in September and October, and I gave each from 25 to 30 pounds per colony for winter stores. I use double-walled hives, with dry pine sawdust packing or forest leaves, and never had any losses from wintering.

ROBT. B. WOODWARD, M. D.

Somerset, Ohio, Aug. 28.

Lots of Golden-Rod and Fall Flowers.

Bees are not doing well at all here just now. I had 18 colonies, but have only eight at present, the rest deserted on account of not having any honey or means of getting it. We had lots of honey in the spring, but have had so much rain that the bees could not work, and flowers would not bloom. The hives have no honey in them. I do not know what my bees are going to do for winter stores, unless they pick up in the fall, which I hope they will do, as they have access to hundreds of acres of golden-rod and other fall flowers, which promise to furnish an abundance of bloom very soon.

JAMES B. DRURY.

New Orleans, La., Sept. 3.

Dequeening—Foul Brood.

Dr. Miller wishes to know whether we still practice dequeening during swarming-time. We do, but not as extensively as formerly. Years ago we bought bees to keep our number of colonies good. With the present low price for honey, we prefer to make an increase sufficiently large to meet losses in wintering and springing. The first colonies offering to swarm are divided; after that, those making preparations for swarming are dequeened. We have practiced this method for 20 years, and it works as well as ever. None but No. 1 colonies will do well without a queen, and it is better to wait until the swarm is nearly ready to issue before removing the queen. If they have been in the air no danger will result, provided they return to the right hive. Such colonies as have made a commencement in sections will keep on with their work.

I was pleased to receive Dr. Howard's book on "Foul Brood." I have had an extensive experience with the disease, having had it in my apiary at the time of my com-

THE BEE-KEEPER'S GUIDE:

—OR—

MANUAL OF THE APIARY.

—BY—

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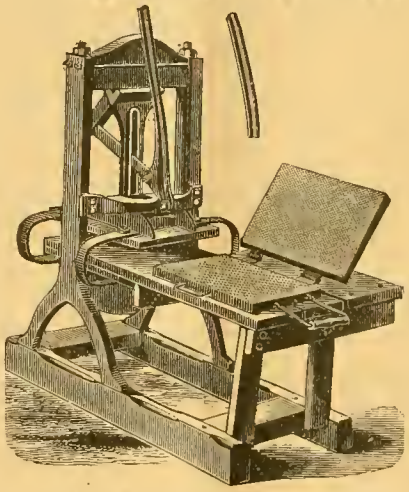

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mencing to keep bees. It has lost its terrors to me. From all that I know, Dr. H.'s book is the most complete work on the subject that we have. It is up to the times, and entirely reliable. P. H. ELWOOD.
Starkville, N. Y.

[The foul brood book Bro. Elwood refers to is the one mailed from this office for 25 cent; or clubbed with the Bee Journal one year—both together for $1.10.—EDITOR.]

The Northern Illinois Convention.

The annual convention of the Northern Illinois Bee-Keepers' Association was called to order at the residence of Mr O. Taylor, in Harlem, by Pres. Leroy Highbarger, Aug. 20, 1895. There was a fair attendance considering the season, there being about 45 at the picnic dinner. All reported a very poor year for honey, the average yield being about 14 pounds per colony.

Mr. Highbarger reported no surplus and no honey in the hives to winter on, and is in doubt whether it will pay him to feed sugar syrup, as he considers the prospects poor for another year on account of the dry weather. There is no white clover starting to grow for another year's bloom.

Question: Has any one had any experience with alfalfa clover? Two members had a small piece; it stood the winter well, but they never saw a bee working on it.

Would you advocate feeding sugar syrup for honey? *No!*

Will a colony of bees fed on sugar syrup, and no honey in the hive, and no way to get it, make comb? Some thought they would, while others thought they would not.

The following officers were elected for the next year:

President, Leroy Highbarger; Vice-President, Otto Swezey; Secretary, B. Kennedy; and Treasurer, O. J. Cummings.

New Milford, Ill. B. KENNEDY, *Sec.*

Packing Bees for Winter.

The article on "Wintering," on page 488, by C. E. Mead, I like very much so far as I understand it, and that is up to where he says, "Place the prepared second," etc.; and "cover the center space." Surely, he does not mean a covering between the five light frames below, and the five heavy frames above, for that would separate the bees!

Again, if I must raise the covers ¼ inch to remain thus all through the winter and spring, how should they be made to resist the snow and rain?

Walking half a mile, and then shoveling my share of a western New York blizzard from about bee-hives, isn't my idea of the heavenly. How can I best build a shed over the hives, to protect them from snow and rain—without watching? Will Mr. Mead kindly explain?

Not an ounce of surplus honey this year—only seven colonies left from last winter's loss; so that seven is the number for which I wish to build. MRS. E. R. B.
Nunda, N. Y., Aug. 18.

[Mrs. B., you will find Mr. Mead's reply to your query on page 616.—EDITOR.]

Hive Bottom-Boards, Etc.

In answer to A. A. D.'s and Dr. Miller's question, on page 522, I would say: I set the hive level on four stakes driven into the ground to within about six inches, so the hive will be about that high from the ground. The stakes are 15 inches apart, so the hive will have a half-inch margin over the stakes. The entrance to the hive is cut out in the bottom-board ⅜ deep, 10 inches wide, and back far enough so there will be about one inch inside the hive. No water will go in the hive farther than the cut; and I cut it so there will be a little incline in the cut. I use both tight and loose bottoms, so cut. (See Gleanings, June 15, 1895, page 47, for description of the hive I

prefer, and its advantages. See page 49' same number; advantage of setting close and under shelter from sun and rain.)

At pesent I have my hives eight inches apart, and if I ever should make a change it would be still closer. There is less robbing and they're easy to work from the back, and I can see no difference in getting queens mated by having them close. I have requeened most of my 100 colonies this season; have seen several young queens leave the hive for their flight, and then return. They could scarcely make a mistake, for on their starting out a number of bees follow outside and remain on the entrance several inches out if the bottom extends. They turn their heads to the entrance, almost standing on their heads, with wings humming a call as like that heard when the swarm is entering the hive. No fear of many mistakes. JOHN CRAYCRAFT.

Astor Park, Fla.

Hives Full of Fall Honey.

Bees have stored the hives full of fall honey—not very dark, but of rank flavor.

JAS. ARMSTRONG.

Farwell, Mich., Sept. 18.

Poor Season—Five-Banded Bees, Etc.

The month of August closes in upon us with little if any surplus. Colonies that were weak in numbers in the spring have barely bred up to good condition, and many of them are short of winter stores. Some of the strongest ones have a little surplus, but nothing more than enough to help out those that are short. We yet have the month of September, and may get some honey from the asters and golden-rod, but present indications are that we shall need all they get from this time on to carry them safely through the winter.

I notice on page 535, an article by W. P. Faylor, on 5-banded bees, etc. As I have had some experience in the line of queen purchasing, it might be profitable to some to give it.

Last spring I bought 15 queens from six different breeders, and among the lot was one 5-banded queen. I gave her a good show by putting her into a medium-sized colony, well supplied with empty combs, honey, and considerable brood; but some way they made little or no progress as to increase of stores or numbers. Had I paid $6.00, as Mr. Faylor said he did, I doubtless should have wanted to put my head into a barrel and shouted long and loud, "What a big dunce I have been!" But I only invested 55 cents in the golden beauty.

Well, last spring I found her alive, and a few bees, so they pulled through and built up somewhat, but seemingly had no push to them. The bees were a small, short-bodied sort of pot-shaped ones, and the queen was long, slim-bodied and sluggish in action; so the other day I nipped her head off, and said, "Good-bye, goldens."

The balance of the queens purchased proved to be very good, excepting one I purchased as untested, from a high-priced dealer, and I very much doubt if any selected tested three or five dollar queen sent out by any dealer would excel some half a dozen of these I bought at the rate of 50 cents each. But let me repeat it again right here: My experience has been that I have not been able to purchase any queens that work up to the standard of excellence that my own do, when I secure them from cells from my best early-swarming colonies.

I have experimented somewhat with rearing queens in upper stories; have given them cells in cell-protectors, knew they hatched out all right, but I never as yet have had a fertile laying queen. They would be gone in a short time; but as others have told me the same thing, I consoled myself that I was not the only fool in this respect. CHESTER BELDING.

Middletown, N. Y., Aug. 31.

Lumber and Log-Book. — Gives measurements of lumber, logs planks; wages, etc. 25c.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

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J. A. LAMON, 43 South Water St.
S. T. FISH & Co., 189 S. Water St.
R. A. BORNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 120 & 122 West Broadway.
CHAS. ISRAEL & BROS., 486 Canal St.
I. J. STRINGHAM, 105 Park Place.
FRANCIS H. LEGGETT & Co., 128 Franklin St.

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C. C. CLEMONS & Co., 423 Walnut St.

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CHAS. DADANT & SON.

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WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

Convention Notices.

MINNESOTA.—The next meeting of the Southern Minnesota Bee-Keepers' Association will be held at Winona, Oct. 15 and 16, 1895. All members are urgently requested to attend. All bee-keepers and others interested are cordially invited. E. C. CORNWELL, Sec.

Winona, Minn.

WISCONSIN.—The Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting at Platteville, Wis., Oct. 8 and 9, 1895. "Come, every one." Don't get discouraged if we haven't got a crop of honey. We will have a good time at Platteville, just the same. Bring your wives and daughters with you. Many interesting subjects will be discussed. M. M. RICE, Sec.

Boscobel, Wis.

UTAH.—The Utah Bee-Keepers' Association will hold their semi-annual meeting in Room 54, City and County Building, Salt Lake City, Oct. 5, 1895, at 10 a.m. All are invited. Come and have a good time. Many interesting subjects will be discussed. Among other questions to be considered will be Markets and Transportation. A union of interest in the industry is much desired.

Provo, Utah. GEO. E. DUDLEY, Sec.

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Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

Bee-Keeper's Guide—see page 547.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Aug. 25.—We are having considerable inquiry for comb honey. We have as yet received but a few small consignments. We quote: Fancy white, 15c.; No. 1 white, 14c. Extracted, 5@7c.
Beeswax, 25@27c. J. A. L.

KANSAS CITY, MO., Aug. 20.—The receipts of new comb and extracted honey is fair, the demand not large, but will increase with cooler weather. We quote: No. 1 white comb, 1-lbs., 14@15c.; No. 2, 12@13c.; No. 1 amber, 11@12c.; No. 2, 10@11c. Extracted, white, 6@6½c.; amber, 5½@6c.; Southern, 4½@5c.
Beeswax, 22@25c. C. C. C. & Co.

PHILADELPHIA, PA., Aug. 19.—New crop of comb honey is coming in more freely and generally in good condition. Demand is now beginning to spring up. New extracted is arriving in a small way. We quote: Fancy comb, 14@15c.; good, 13c.; fair, 9@11c. Extracted, 4½@5½c. It is hard to get our market to rally after the blow it received in the spring on discovering such a large amount of beeswax adulterated. We quote pure wax, 23@25c. W. A. S.

ALBANY, N. Y., Sept. 6.—Honey market opening with good demand. Receipts lighter so far this year than last, but do not look for higher prices. We quote: White comb, 14@15c.; mixed, 13@14c.; dark, 11@12c. Extracted, white, 6½@7½c.; mixed, 6@6½c.; dark, 5½@6c. Beeswax, 28@29c. H. R. W.

CHICAGO, ILL., Sep. 4.—The new crop is coming forward and sells at 15@16c. for best lots; dark grades, 9@12c. Extracted ranges from 6@7c. for white, and 5@5½c. for colored, flavor and package making difference in price.
Beeswax, 27@28c. R. A. B. & Co.

BUFFALO, N. Y., Sept. 16.—Light receipts are prevailing in our market and demand is improving. We quote: Fancy one pound sections, 15@16c.; choice, 13@14c.; buckwheat, slow sales at 8@10c. B. & Co.

CINCINNATI, O., Sept. 18.—Demand is very good for all kinds of new honey, while supply is scant. We quote: Comb honey, 12@16c.; extracted, 4@7c. on arrival.
Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. M. & S.

CHICAGO, ILL., Aug. 23.—Fancy white comb honey (1-lbs.) in nice, clean packages sells at 16c.; other grades of white honey, 14@15c.; amber, 13@14c. We are having a good trade in extracted honey, selling light amber and white at 6@7c.; dark, 5@5½c depending on quality and style of package. Early shipments to market advised so as to permit of sale before cold weather sets in.
Beeswax, 28c. S. T. F. & Co.

NEW YORK, N. Y., Sept. 11.—New crop of comb honey is arriving and while the receipts from N. Y. State are light, we are receiving large quantities from California. Had two cars of choice comb and have several more to follow. On account of warm weather the demand is rather light as yet. We quote: Fancy white, 1-lbs., 15@16c.; fair white, 12@13c. No demand as yet for buckwheat and dark honey. Extracted is plentiful, especially California and Southern. We quote: California, 5@5¾c.; white clover and basswood, 6@6¼c.; Southern, 45@55c. a gallon.
Beeswax in fair demand and firm at 28@29c.
H. B. & S.

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Passage-Ways in Brood-Combs.

Query 989.—Bees are much given to leaving a passage between the comb and bottom-bar in brood-frames. Suppose by inversion or otherwise the comb is built out solid to the bottom-bar, will they afterward gnaw away a passage?—Colo.

J. A. Green—No.

Prof. A. J. Cook—No.

Mrs. L. Harrison—No.

Eugene Secor—I think not.

W. R. Graham—I think not.

Jas. A. Stone—I don't know.

P. H. Elwood—Usually they will.

E. France—I don't think they would.

Dr. C. C. Miller—I don't think they will.

W. G. Larrabee—I never tried it, so I don't know.

H. D. Cutting—Not if the other conditions are all right.

Rev. E. T. Abbott—I do not know. Try it and find out.

Chas. Dadant & Son—No, not usually. They may, if they need it.

J. M. Jenkins—No, not if they can pass under the bottom-bar.

G. M. Doolittle—Not as a rule, unless the combs get badly molded.

Dr. J. P. H. Brown—They would unless there was a free passage-way beneath the frame.

Mrs. J. N. Heater—As a general thing no; not if they have only a bee-space below the frames.

J. E. Pond—I do not think they will, but I have not experimented in that direction, so I don't know.

W. M. Barnum—I have known them to, but not as a rule. Is the inverted-frame craze coming up again?

J. M. Hambaugh—Not if there is a good bee-space between the bottom-bars and platform or top-bars, as the case may be.

C. H. Dibbern—I have practiced inverting, to some extent, and I find the bees are very apt to again gnaw holes next the bottom-bar.

Rev. M. Mahin—They will not. At least I have never known them to do so, and I have a great many combs that are built down to the bottom-bars.

R. L. Taylor—In my experience, bees sometimes cut away worker-comb for the purpose of making room for drone-comb, but never to make a passage-way.

Allen Pringle—No, they will not gnaw away a passage unless the space between the bottom-bar of the frame and the bottom (or "floor-board" as our English friends call it) is insufficient. If it is, they will probably "gnaw," and who would blame them?

B. Taylor—No. But I do not want the comb built fast to the bottom-bars. I want the bees to have a place to make queen-cells on the lower edge of the combs; otherwise they will make cells on the surface of the combs and spoil them in a few seasons. Filling up the hive solid with combs with only ⅜ inch between them, does not give the bees clustering-room enough.

G. W. Demaree—I never invert combs for any purpose, and I am not troubled with unfinished combs at the bottom-bars of the frames. When combs are once well connected with the bottom-bars, my bees never cut out any comb for a passage-way, because it is easier for them to pass under the thin bottom-bars.

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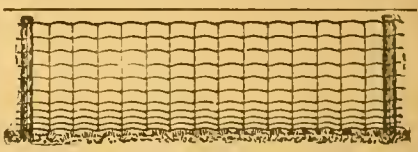

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35th Year. CHICAGO, ILL., OCT. 3, 1895. No. 40.

Report of the Proceedings

OF THE

Twenty-Sixth Annual Convention

OF THE

North American Bee-Keepers' Association,

HELD AT

TORONTO, Ont., Sept. 4, 5 and 6, 1895.

W. Z. HUTCHINSON, SEC.

(Continued from page 615.)

The First Importation of Italian Bees into America.

At this point, Father Langstroth entered the hall, when the members all rose to their feet, and, greeting him with three rousing cheers, remained standing until he had reached his seat on the platform. He very feelingly thanked the convention, saying that the respect and good-will of so many good men and women were more to him than gold and silver.

He then gave a brief history of the first importation of Italian bees into this country. Mr. S. B. Parsons was the man who made the first importation. His bees were brought in the original hives. They had stood the packing on mules' backs and the ocean voyage, and then were badly damaged by being loaded into wagons and driven over rough stone pavements. Mr. Parsons knew but little about bee-keeping, and followed the advice of those who told him that bees must be shut in or they would fly away. The hives were put into a shed, and netting put up to keep the bees in. He was told to feed them, and platters filled with sweets were put out, and attracted other bees, and robbing was soon the order of the day. Father Langstroth was invited to come and examine the bees. He found them all dead except one queen and a handful of bees. This queen he introduced to a strong colony, and in this manner she was saved.

In the second shipment were three lots—one for Mr. Parsons, one for the Government Patent Office and one for Mr. Mahan. Those for the Patent Office and for Mr. Mahan were all dead, and of the Parsons lot only two queens remained alive. One of these queens was placed in the hands of Mr. Wm. Cary and the other entrusted to Father Langstroth.

Mr. Cary was very successful, rearing all the queens for which there was any demand. In those days a black queen and a bright yellow one was seen to hatch from the same comb. The drones were dark and mixed in color. Thinking that they had impure stock, these men went to work to get other stock, but, as Father Langstroth remarked, "We now know that color in queens and drones is not an indication of impurity, but this question is decided by the workers."

The first person to think of importing Italian bees was Samuel Wagner. He sent for some of them, and money was furnished the mate of the vessel to buy feed for them, but he thinks that the mate ate the honey and let the bees starve.

Mr. Thos. G. Newman told how well known Mr. Langstroth was in Europe. When Mr. Newman was traveling there in 1879, and told some of the prominent bee-keepers the story of Father Langstroth—how he had been cheated and robbed, and that he was now in need of assistance—those gentlemen went down deep in their pockets and made up a generous purse to send to him. Mr. Newman hoped that we would be none the less generous.

Next came an essay by Mr. F. A. Gemmill, of Stratford, Ont., on

Who Shall Winter Bees in the Cellar; Who Out-of-Doors?

The above is indeed a poser, and just why I should have been selected to contribute an essay on such a comprehensive subject, rather baffles me. Having, however, undertaken the task, I am, as a matter of course, expected to make some statements, even if they do not harmonize *in toto* with the experience of others.

The fact is, that seasons, conditions and surroundings really seem to differ, even in the same localities, one year with another, that we frequently find those who at one time strongly advocate one particular kind of wintering, changing their methods, and just as strongly recommending and practicing another. Without, therefore, attempting to lay down a general rule for all to follow, I will take the more discreet plan of asserting, that the safest method for each individual to follow, is the one which, after a thorough trial, has been found most successful with himself.

Now, although such advice is both sound and rational, it is nevertheless more applicable to those who are already quite satisfied with the plan they have been following, and who have no intention of again changing. I therefore assume, that some suggestions or reasons are to be outlined, in order to assist those who may yet be in doubt as to what course to pursue in the future.

As time, labor, and expense, are fractions which, on account of the low price of honey, enter largely into modern apiculture, any method or system which will assist in reducing such to a minimum, by securing the best returns at the least expense, is the method sought for, and the wintering problem in the Northern States and Canada, may rightfully be considered as the primary one in securing the end in view, as properly wintered bees are, as a matter of fact, a necessity, consequently too much experimenting in this direction, especially on a large scale, is to be avoided, except by those who can afford to indulge in such a luxury, if such it can be termed.

On the other hand, I am not quite certain that the majority of those who practice either one or the other of the methods herein outlined, are thoroughly satisfied that the *acme* of perfection has yet been attained, and as "an open confession is good for the soul," I must also admit my doubts in this respect, but until some more perfect manner is found, we can only continue doing the best we know how, which, even with our present knowledge, if always properly carried out, would give far more satisfactory results.

To those, therefore, who have the facilities for wintering inside—such as a good cellar, or repository built especially for the purpose—and can succeed in bringing the bees through so perfectly that spring packing of the hives is not a necessity, when removed from their winter quarters, on account of the exposed location of the apiary—to those I would say, continue to winter in the cellar. My own experience in this direction so far, has proved that the quality of the stores, in this as with outside wintering, is the first consideration, with the exception that a less quantity will suffice, with a still less necessity of it being concentrated in one particular portion of the hive.

The humidity of the repository is not to be ignored, although dampness is not detrimental, if the other conditions

are favorable, such as a nearly uniform temperature, with a sufficient quantity of pure air, accessible at all times, in such a manner as not to disturb the occupants of the hives. As to what should be the temperature, this can best be decided upon by studying the point at which the bees are best behaved, a damp cellar naturally requiring a higher temperature than a dry one. Pure air can be supplied either through sub-earth pipes, or by allowing it first to enter an outer repository, and afterwards allowed to find its way in, when not too cold to produce disturbance and in order to remove the foul air, a small tin pipe may come within three or four inches of the floor, and attached to a stove-pipe overhead, or direct communication may be given through an opening in the chimney bottom, providing it extends sufficiently low down in the cellar. There are, however, many cellars which admit pure air in sufficent quantity, that no other provision need be made for such.

As to what preparation the hives themselves should have on going in and after being stored, possibly the most general one is to remove the propolized quilt, and placing thereon another new one, covered in some instances with a cushion of some porous or absorbing material, and the ordinary summer entrance left open at the bottom; still, this is not necessary, nor in all cases desirable, as success is attained by leaving the propolized quilt on as in summer, and as often, if not oftener, by simply leaving the ordinary wood cover on the hive and giving all the ventilation at the bottom—by either raising the front of the hive from the bottom-board, say three or four inches, or, in fact, removing the bottom-board altogether.

The above system certainly has the advantage over outside wintering, in that less material is required, and less labor needed to secure the object sought for, although at present circumstances do not permit it being carried out.

And now, to those who, from necessity, or others, again, who from choice, prefer to winter bees out-of-doors, a few concluding remarks may not be out of place, if indeed not actually hoped for, even from this now already too lengthy article.

First of all, then, outside cases are of course indispensable, and there being so many different kinds in vogue, I am at a loss which to recommend, as however cheapness combined with utility is essential; possibly one that will contain two or more colonies, and made of plain, unpainted, rough boards, will, on account of to some extent utilizing the combined heat of the bees, prove as satisfactory as any other, especially if a large amount of packing is used; yet, I am not by any means satisfied from my own experiments, as also those of others of late years, that this arrangement is superior, or even as good, as if a less quantity of packing is used (say two inches), with a separate case for each and painted a dark red color, with no upward ventilation whatever, so that at times the advantages of solar heat absorbed from the sun's rays might assist in rousing up the bees and thus dispelling the accumulated moisture through the entrance instead of allowing it to pass out at the top, through the porus packing, in which much of the natural heat generated by the bees is almost lost. This I trust may be profitably discussed at this meeting, although it may not appear to some a part and parcel of my article proper.

In order, therefore, to be brief, I need only further add that the quality of the stores as well as the position in the hive, which they occupy, is far more requisite in this than in cellar-wintering; and while I have no desire or motive in attempting to appear eccentric, I will state that bees that are well crowded on combs of sealed stores, with little or no empty comb on which to cluster, have always wintered exceedingly well with me, as well as with others in Canada, notably Mr. Wm. McEvoy, who is a strong advocate of having the "constitutional condition" of the hive, as he is pleased to term it, just so; that I prefer a hive well packed with bees, and 25 or 30 pounds of well ripened sealed stores on the approach of winter, even if the hive be made small for the purpose, and again enlarged in spring when required.

Nothing further remains except that a two-inch rim may, if one chooses, be added under the hives; this I have found not an important factor, if the entrance proper is not allowed to become too long obstructed by snow, ice or dead bees; and, lastly, a caution that the hives are not permitted to become completely covered over with snow, which, if allowed to remain too long, results as a rule in no good to the colony. Having done this, and complied with the requisites regarding upward ventilation, through from six to eight inches of chaff or forest leaves, (the same material being used for packing the sides), with an entrance of about four inches long by ⅜ inch high, little, if indeed anything, more can be done in order to reasonably succeed in this particular branch of apiculture.

I do know that success has attended my efforts in the past by the above system, yet I at the same time have succeeded in very cold winters, such as the past, by allowing no upward ventilation whatever, and giving a generous—yes, even large—amount of lower ventilation; the latter plan, however, does require that the other proper conditions are more strictly adhered to.

It is almost unnecessary to still further add, that there is with apiculture quite a sufficiency of uncertainty to cause those who intend following it to be timely and orderly in doing what ought to be done, as a laggard is not any more likely to succeed in this work, if as much so, as in any other pursuit; while those will best succeed who aside from the dollars-and-cents point of view have a real love for the calling, and who also possess common-sense in sufficient quantity not to be carried away with the idea that bees always "work for nothing and board themselves," without some consideration from the apiarist.

F. A. GEMMILL.

Mr. Gemmill's essay was then discussed as follows:

S. T. Pettit—Why must a damp cellar have a high temperature?

Mr. Gemmill—I have found it necessary.

Pres. Holtermann—I think that we often make a mistake in thinking a cellar damp unless it is tested with a wet and dry bulb thermometer,

Wm. McEvoy—Crowd the bees down on solid combs of honey, then there is no chance for the queen to lay until toward spring.

Dr. Mason—Why does Messrs. Hall and Pettit raise one end of the hive?

Mr. Pettit—To be sure there is plenty of circulation.

Mr. Hall—Mr. Pettit is correct; but that isn't why I do it. My object is to get rid of mouldy comb and dead bees.

Mr. Pettit—For some reason I can get better results by using bottom-boards.

The convention then adjourned until 2 p.m.

(Continued on page 645.)

Contributed Articles.

On Important Apiarian Subjects.

Section Honey Production and Swarming.

BY G. M. DOOLITTLE.

My excuse for writing this article at this time, instead of for the month of June, lies in the fact that a bee-keeper from one of the Western States is considerably agitated over the result of the past season, and requests me to write an article on the above subject for the American Bee Journal as soon as possible. He writes that he has had no trouble in following the ideas I have sometimes advanced in regard to spreading the brood, which some of our bee-friends seem to think as misleading to the bee-keeping fraternity as a whole, for there was no trouble in getting the hives filled with brood and bees by the time the honey harvest arrived by using the plan; but the trouble was, that when the hives were thus filled and the flow of honey occurred, excessive swarming was sure to result, which gave a loss in honey and often in queens, owing to the fact that the queens were not allowed to go with the swarms.

Swarming, when working for section honey, cannot very well be avoided, or at least bee-keepers have not been very successful in avoiding it, without sacrificing a large amount of the honey crop. In fact, so far, it would seem better to have excessive swarming than to try to hinder it altogether by any of the plans so far given to the public, for by any of these, where the ordinary hive is used, the bees are so thrown out of their normal condition that they will not work to their best advantage.

Again, I think that a mistaken idea prevails with some, in thinking that the brood-chambers must be kept full of brood the whole season through. This is not the secret of the successful honey-production, but it lies in having the brood-chamber filled with brood before it is filled with honey. Thus doing we get the laborers for the first harvest, and, so far as my knowledge extends, when the brood-chamber is thus filled when honey harvest commences, there will be bees enough reared for all practical purposes after this, even though the combs may be filled, later on, two-thirds full of honey.

There are two plans, or ways of management, which can be used successfully during the swarming season, in this locality, and if I lived in any of the Western States I would try them there, and then, if they did not work, I would study out something else. And right here I wish to say that there

is too much blind following of those who write for the bee-papers, amongst the rank and file of bee-keepers, without trying to originate some thonghts and plans of their own, and something that is just suited to the locality in which they find themselves. Every person having bees, or, for that matter, anyone following any pursuit in life, should have some thoughts of his own—thoughts which will lead him out in all directions from the beaten path of those gone on before, and in this way help to lift up the avocation which we have chosen, to a higher plane. We should not be a machine, but the *master* of a machine, or of anything else we may take hold of. So, when we find ourselves confronted with the swarming problem, or any other, we should master it, if it "takes all summer," and do it by our own planning, or the modifying of some plan that we have read or heard about. In this way we will grow, and by telling others how we do it, through some of the mediums which we have for the exchange of thought today, we will help some one else to grow, and thus we shall be of mutual benefit to each other, just as the All-Wise Father designed we should be, and be lifting this old world up to where God designed it to stand—to where His will should be "done in earth as it is in heaven." But to return.

When a swarm issues, and while it is out in the air or clustered, go to the hive from which it came, and take out all the frames of brood and put in their places frames of empty comb, frames filled with foundation, or frames having starters in them, as is best pleasing to you, returning the surplus arrangement on the hive as it was before, and if the swarm is a large one, it is well to give additional room by way of another set of sections. When this is done, hive the swarm back in the same hive, or let it return if the queen has her wing clipped.

Set the frames of brood, with the adhering bees, in a hive on a new stand and in 24 hours give a maturing queen-cell or a queen, according to what you can supply. This should satisfy any colony, but if the swarm on the old stand should persist in swarming in from ten days to two weeks, then I would cage the queen for a few days, according to circumstances, when she is to be released, after cutting all queen-cells. This is on the plan of doubling our colonies each year.

If I wished no increase, then I would put on a queen-excluder after putting in the frames below, and on top of this I would place the hive containing the frames of brood (which was to be set on a new stand in the plan given above) while on top of this last I would put the surplus arrangement that was on the hive when the swarm issued. This should do away with all further swarming, but it results in filling these combs which now have the brood in them, with honey, which must be extracted, while it lessens our crop of section honey just that much. Where any can make it pay to feed back extracted honey to have it stored in sections, as some claim they can, then the amount of section honey need not be materially lessened; or, if we live in a locality where our bees are liable to be short of stores in the fall, these frames of honey would be just the thing to give the bees to winter upon. Being sure of plenty of stores to winter on each year is one of the things which gives pleasure to most bee-keepers, for the having of nearly empty combs with winter staring the bees in the face is something not enjoyable to any apiculturist.

Borodino, N. Y.

Some Experiences with Large Hives.

BY REV. L. L. LANGSTROTH.

Some years before my health, and the death of my son in 1872, compelled me to dispose of my apiary, I had a dozen Langstroth hives made, each containing 13 frames in the lower story. The supers held some 18 frames. These hives were used mainly for extracting. I liked them better than the 10-frame hives. They were sold to Mr. Wm. McCord, my next door neighbor, the bees having been removed from them.

These extra-large hives remained in constant use by Mr. McCord until his death, less than a year ago. During all this time I had many opportunities to examine them, and I was satisfied that they were more profitable on the average than the 10-frame hive, which out-numbered them in his apiary. I used them only one season for comb honey. The honey crop that year was a poor one, but if it had been a good one, I do not think that I should have liked them for comb honey, and I did not use them long enough for extracting to fully establish their superiority over the smaller size.

Eleven of the frames were usually well filled with brood by the time when the honey harvest began. Mr. Wm. McCord was a very *cautious* bee-keeper. He seldom extracted from the lower story, and in a fair season he usually had more honey below than he needed for safe wintering, and he often used this surplus to supply such of his colonies in 10-frame hives as were deficient in stores.

His brother David, who lived next to him, was also a skillful bee-keeper, and usually had many more colonies than William—all of which were kept in smaller hives—some holding ten and some nine frames.

I left Oxford, Ohio, in 1887, and generally, either by visits or letters, knew how the McCord bees prospered. I was so well persuaded that the large hives were more profitable, *in Oxford*, for extracted honey, that just before my last spell of head trouble I purchased two of these large hives well stocked with bees, for my own use, to be kept in the apiary of a Dayton friend. McCord did not wish to part with them, and charged a proportionate price for them.

I give these facts for what they are worth, and by no means as settling the question so much argued, as to the proper size of hives. Dayton, Ohio, Sept. 19, 1895.

What Dr. Miller Thinks.

DADANT'S HIVES.—On page 607, R. Dart says I'm trying to poke fun at everybody. Now just to pay you for saying that, Bro. Dart, I'm going to poke fun at you for saying that Dadant uses the 10-frame hive. Why, bless your heart! a 10-frame hive would not begin to do him. He uses the Quinby frame, and it would take at least a 12-frame hive of Langstroth pattern to equal his hives in capacity. In the discussion as to 8 and 10 frame hives, the Dadants have had very little to say, for they are both too small. I hereby challenge them to show cause why they should use hives of such unreasonable size, under penalty of being shipped back to France should they fail.

PRESERVING COMBS FROM MOTHS.—Dr. Gallup says on page 599: "Now if anyone has a better method than the above to preserve combs from the moth, trot it out." Well, Doctor, in most cases it's a better plan to leave them in the care of the bees. Unless the number of idle combs greatly exceeds the number of those needed by the bees, they can easily take care of them at any time when it is warm enough for the moth to do harm, unless it be during the honey harvest when working for comb honey. But at that time one will not have long to wait to have them all in use for swarms or nuclei.

J. B. HALL AND THICK TOP-BARS.—I'm glad to see that the Canadians have put at the head of the Ontario Association that very practical bee-keeper, J. B. Hall. When the North American met at Toronto twelve years ago, Mr. Hall had very little to say in the convention, but at the Fair, where he had some exhibits, I had a really good visit with him, and it was then that for the first time I saw his top-bars one inch thick. Thick top-bars have become popular since then, and I'd very much like to know where Mr. Hall first got the idea, or whether he made it up out of his own head. He's such a turtle in his shell that it's hard to get him to say anything in print, but perhaps if I should call him names and get him mad he might tell. Say, you Canuck! you Johnny Bull! you're no better than you ought to be. Stick your head out of your shell long enough for me to get a crack at you, and own up from whom you stole the idea of a thick top-bar.

ONE BEE-BOOK OR MORE?—I've just a little doubt as to the wisdom of throwing about promiscuously the advice of Bro. Abbott on page 602. He is sure that beginners should not have more than *one* good bee-book or paper, as more would only confuse. I know there's something in the fact that if one had a bee-book that gave specific instruction for a certain course of action, it would be less confusing than to have another whose teachings should conflict. If there is no conflict of teaching, then certainly there is an advantage in having more than one book, for the same thing being presented with a different wording might be a little more easily understood than with only one presentation. But suppose there is conflict. In that case the supposition is that at the point of conflict one book is better than the other. If the beginner can be sure that he has the book that is best at all points of conflict, then he would better have only one, so far as that is concerned. But one book may be best at one point and the other at another, so to get what is best at all points he needs more than one. If the beginner is ever to have more than one book, he must use his judgment in deciding what is best for himself, and it may be as well for him to begin using that judgment at the start.

With regard to the bee-paper, I don't see the least reason

why the beginner should confine himself to one, even if the reason for having only one book should be considered conclusive. For he will find all the divergence of views in any one of the papers that he will find in all.

Is Swarming Desirable?—Years ago it was a matter of congratulation to have many swarms. At present most bee-keepers would rather not have many, and on page 600 James Cormac says: "All admit that if swarming could be prevented entirely, much more honey could be obtained." But in the next paragraph he says swarming ought to be encouraged. Some explanation should be given for this apparent conflict of opinion, for the beginner will probably ask, "If more honey can be obtained without swarming, why should swarming be encouraged?" Marengo, Ill.

Sugar for Winter Stores—Feeders and Feeding.

BY C. DAVENPORT.

I wish to apologize to Gleaner for not answering the questions he asked me some time ago. But the fact is, I did not know as much about sugar as he, and I also wanted to know. Since then I have been trying to find out some things about sugar, but as yet about the only thing I have been able to discover is that I do not know as much about sugar as I thought I did.

Bulletin No. 13, from the United States Department of Agriculture, Division of Chemistry, tells us that United States chemists analyzed 500 samples of sugars obtained in the open market and that all were found to be absolutely pure, except that some of the lower grades were found to contain a slight excess of water. I am skeptical about some of the statements in this Bulletin myself. Two years ago I bought a quantity of cheap, very coarse, granulated sugar, which had a somewhat blue or greenish color. I thought this might answer for spring feeding, but although at the time bees were flying freely nearly every day, from the very first the bees in all colonies fed with it commenced to die off very rapidly, and later there was a good deal of dead brood in these same colonies. I have no doubt that this sugar was adulterated. Take any kind of granulated sugar and make it into a thick syrup, by boiling it, and after it stands for some time it will have a blue or greenish color. This will be more apparent with some brands than others. It is said that this is caused by ultramarine, which is used in the refining process. This ultramarine is a deadly poison, but whether there is enough of it in the best brands of granulated sugars to affect the health of bees in localities where they are, or are liable to be, confined for four or five months during the winter, I do not know, but I think there is in some brands.

Some report very poor results with sugar for winter stores. In Gleanings, Mr. E. France says that in the fall of 1892 he was obliged to feed 14 barrels of sugar, and that winter he lost 160 colonies. Although he does not say so, I infer from what he does say, that he believed the sugar to have been the main cause of his large loss of bees that winter.

Gleaner says that across the seas they claim beet sugar is not suitable for bees. If it is a fact that it is not, it may be the cause of the poor results some have with sugar for winter stores, for there is, I believe, a good deal more beet sugar produced in the United States than is generally supposed; and I think, without doubt, this is all consumed at home. From reliable statistics before me, I find that in 1892 there was produced 12,004,838 pounds; in 1893, there was more than double this amount produced; in 1894, California alone produced 32,788,442 pounds. I have been trying to find out under what name, or brand, this beet sugar is put on the market, but I have been unable to do so. It seems to me it would be a matter worthy the attention of some of the experiment stations, to find out how beet sugar is labeled, then procure some and give a number of colonies an exclusive diet of it for winter, and see how it agrees with them.

Some time ago, the editor of the Review, in making some comments on an article he copied from the American Bee Journal, among other things said:

"I believe every one considers it perfectly legitimate to use sugar in rearing and wintering bees. This means practically the exchanging of so many pounds of sugar for an equal number of pounds of honey."

I fully agree with him, but for winter stores it is very important, at least in the Northern and Middle States, to know for certain what is the best sugar, and, if beet sugar is not fit for winter stores, to be able in some way to distinguish it from that which is made from cane. I have largely used and prefer a brand that is labeled thus: "National Standard. Fine Granulated Sugar."

Gleaner also wanted to know how I got bees out of the Miller feeders. If I wish to remove a feeder before the feed is all taken out, I treat the feeder the same as a super of honey, and use one of the super-clearers like I have before described, or any of the bee-escapes I think would work all right. But I do not put any more feed in than I wish the colony, over which it is placed, to have, and I generally leave it on until it is all removed. But after the bees have removed all the feed, they will (many of them) stay in the feeder for three or four days, and sometimes, in some cases, much longer.

When the feeders are empty it is no trouble for me to get the bees out of them, for in nailing these feeders I do not nail either of the two boards—the two that have the strip of wire cloth on the bottom—fast to the feeder. I nail them fast to the board that covers them. This then makes a long, narrow box without ends or bottom. This can be removed from the feeder in an instant, and any bees that are on it or the rest of the feeder, can then be shaken off in front of their hive. I drive a couple of small nails in each end of the feeder outside of these loose boards, which keep them from moving too far to either side. I do not use any wire-cloth on the bottom of these boards. If the outside of each board next to the bottom is shaved down thin, and a few small notches cut on the underside, there is no need of it.

There is another advantage in having these boards loose. When a feeder gets to leaking, it is much easier to fix it when these boards can be removed.

I will describe another way I made a few of these feeders last spring. It is some more work to make them in this way, but when they are made, in my opinion, they are superior to any feeder that is, or can be, made for feeding a full colony.

In making them neither of the three boards I have just mentioned are used, with this exception: The feeder is nailed up in the usual way; a couple of thin boards are cut so they will fit, but move easily up and down in each feed reservoir. These boards need a cleat nailed on the upper side at each end, to keep them from warping, and also to have a number of small holes cut in them so that the bees can reach the feed underneath. A light frame covered with wire-cloth is hinged to the top of the feeder to prevent bees from flying out when being examined, or when more feed is poured in, which is done by simply pouring it through the wire-cloth into the feed-reservoirs beneath. But that loose board in each of them will sometimes get stuck fast to the bottom, and refuse to raise when the feed is poured in. A piece of stiff wire, or a long wire-nail, run through a hole in these boards with the head on the under side of the same, and the other ends allowed to project through the wire-screen above, enough so that one can get hold of it, will overcome this. Of course, in pouring the feed in, some bees will get daubed up with it, but the others will clean them off all right. Bees seem to take the feed from this feeder more readily, especially weak colonies, and all colonies seem to do so in the spring.

But for rapid feeding in the fall for winter stores, a large milk-pan, or any tin pan, answers about as well as anything. This can be set in an upper story and covered with cheese-cloth to prevent the bees from drowning. I have used these a good deal, but I had a good deal of trouble with the cheese-cloth part at first, and as some others may have the same experience, I will explain how I fixed it.

I used to take a thin piece of board and cut it to fit the bottom of the pan to be used; punch a lot of small holes in it, then tack the cheese-cloth around the edge of it; no matter how flaring the pan used, or whether the board is anywhere near the fit, if it is some smaller than the bottom of the pan it will work all right. Of course, enough cheese-cloth should be used to reach to the bottom of the pan on the outside, as it is hard for bees to walk up on tin.

I believe some say that when bees are fed sugar syrup for winter, that it is better if they do not store it too fast; and that sugar syrup stored by bees tastes much more like honey if it is stored slowly. This may be so, but I cannot see why it should make any difference in either case. If it is stored rapidly, more bees store it; when it is stored slowly, only a few bees work at it, which I believe is always the case where it is stored slowly. I do not believe these few bees add any more acid to it, or retain it any longer than each one would, if there were enough to do the work rapidly. I can understand that if the syrup was fed thick or thin it might make a considerable difference in either case. Southern Minnesota.

Every Present Subscriber of the Bee Journal should be an agent for it, and get all others possible to subscribe for it. See offers on page 642.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Controlling Swarms.—"I want a system of management that will keep the full working-force of the colony together during the entire honey-flow unless I want to increase my colonies by taking a prime swarm from each colony. If I want no increase I prevent swarming by raising all the sealed brood above the queen-excluder and confine the queen below the excluder. If I want the prime swarm, I let them come, hive them on the old stand, remove the parent colony to a new location, after shaking enough bees from the combs to prevent after-swarms. There is no use of any fuss about it. After the old hive has set by the side of the new one a few days, shake the bees off of all the combs except one that has a good queen-cell on it, and move the old hive to a new location, and rest easy. There will be no after-swarm."—G. W. Demaree, in Canadian Bee Journal.

It seems to me that Mr. Demaree has embodied a good deal of information, which is valuable to the beginner, in a short paragraph. I have found that it is very hard to get the beginner to see the importance of "keeping the full working-force of the colony together during the entire honey-flow." They nearly all seem to think that the more colonies of bees they have the more honey they will get, and it is very hard to make them understand why it is that a good, strong colony of workers will gather a surplus of 50 to 75 pounds of honey, when if they had been divided, and two colonies made out of them, they would probably not have given their owner any surplus honey at all. The beginner to too apt not to take into consideration the strength of the colony, and argue that if one colony will gather 50 pounds of honey, surely two will gather 100 pounds; but they will not, just the same.

I think, too, that the suggestion about the prevention of swarming should receive the careful attention of the inexperienced bee-keeper. Mr. D's management of a colony which has cast a swarm is one which I can commend, also. That is well put when he says, "There is no use of any fuss about it." Sure enough! I have often wondered why it was that there is so much said about "after-swarms," etc. I have not had a "second swarm" in years, and I am quite sure if the plan suggested above is followed to the letter, not one colony in 500 will throw out an after-swarm. I am equally sure that a colony that has been permitted to follow Nature's course and swarm, will, if handled in this way, store a great deal more honey than it would if it had not been permitted to swarm in the natural way.

Do the Bees Open the Queen-Cells?—"From the lower end of this cell (a queen-cell) hangs a lid, which was cut away by the workers to allow the queen to emerge."—Prof. Comstock, in "Manual for the Study of Insects."

Is there not some mistake here? I have seen scores of queens cut their way out of their cells, but I have never seen a worker-bee render any assistance in this operation. Prof. Comstock, unlike many other scientific men who write about bees, seems to have studied them at first hand. That he has made a personal study of the economy of the bee-hive may be inferred from the following: "There is a large literature concerning the intelligence of bees, but those who love to see rather than merely think about interesting things will find the keenest pleasure in intimate associations with those little communists." It does not seem that the author of such a sentence would make a mistake about the one mentioned above, but I am inclined to think that he has failed to make close observation in this case, or else his observation for once must have led him astray. I would be glad to know what has been the observation of others. It is only by the combined testimony of a number of close observers that we can arrive as to what each member of a colony of bees does or does not do.

While it has no direct bearing on the above subject, I am constrained to make another quotation from Prof. C's book, as it shows the keen appreciation he has of apiculture and all rural pursuits.

"Neat rows of hives on a sunny slope, with an orchard on one side and wide stretching meadows on the other, the busy hum of comers and goers of this city of cities, the odor of honey weighing down every passing breeze—these constitute one of the most home-like possessions of the ideal country-home."

These are my sentiments expressed better than I could do it myself. If there is any man on earth who has cause to be happy and contented, it is the farmer who owns his home, with not too much land, and has about him "neat rows of hives;" "wide stretching meadows," (not too wide); lowing kine of some improved breed; sleek and well-kept, fat and prancing horses; with fine sheep, hogs, poultry, etc., and an abundance of all kinds of rich and delicious fruits, which add to his comfort, health and happiness. These with a loving wife and contented children, should fill to the brim the cup of human happiness. I may be permitted to remark just here that all of these may be obtained with much less fret and worry than can a great fortune, or even a competency, in a large city, if one is trained for the duties of farm life from his youth up. A German proverb runs:

"Keep plenty of bees and sheep,
Then cosily lie down and sleep!"

Among the Bee-Papers

Gleaned by Dr. Miller.

HE DOESN'T OPEN HIVES.

I used to always examine colonies having young queens to see if they had successfully mated and commenced laying. Once in a great while I would find that one was lost and I supplied a queen. I don't do this any more. Suppose a queen *is* lost, the hive, combs and honey (that would have been converted into bees) are left, and there is a better chance in the field for the other bees. It is the same with other things. As a rule I don't open a hive unless there are some external indications of trouble, and I am sure that I am the gainer by the practice.—Editor of Review.

CAUSE OF QUEENS PIPING.

E. E. Hasty says in Review:

"Dr. Miller has known an old queen to pipe with no other queen near; and he suspects fear instead of jealousy as the cause. Perhaps she smells something, who knows? Say, now, it couldn't have been alchohol or oil of tobacco exuding with her keeper's perspiration, now could it?"

That man Hasty will get hurt some day.

WAX PRODUCTION.

Among the questions in the Australian Bee-Bulletin is the following:

"What plan of working would you recommend to increase the production of wax per hive? This question is given on account of the steady rise in value of wax in the European and American markets."

Nearly four pages of fine print are given to the discussion of the question, some thinking there's nothing to be gained in that direction, and many being hopeful.

AMALGAMATION.

Dr. A. B. Mason, in Review, opposes the consolidation of the North American and Union, but in case of such consolidation offers the following suggestions that are worth considering:

"If a union of the societies is considered advisable would it not be well to adopt the name Bee-Keepers' Union, or the North American Bee-Keeper's Union, and have its officers and board of managers chosen in the same or some similar way as is now done by the Union, and so remove the management of

its affairs from the control of those who join the organization when a convention is held in their locality? Then it will not matter in what part of North America one lives, he can send his membership fee, and vote, and feel he is doing something towards 'dignifying our profession and maintaining our inalienable rights,' as Mr. Heddon puts it. Conventions can be held so as to give us a chance to 'see the boys,' *and girls*, and discuss matters of interest to the fraternity, but leaving the conducting of our legal and kindred matters entirely in the hands of the, or *a*, Board of Managers composed of the best business talent in the fraternity."

NUMBERING HIVES.

If simply producing honey for market I see but little more use for numbering the hives than in numbering the trees in a sap-bush, the sheep in the pasture, or the trees in an orchard. If I visited an apiary it would be with some definite purpose. If in the early spring to see if any colonies needed feeding by taking combs of honey from those having plenty, I should go at the work systematically, and go through the whole apiary and then go home. Numbers would not help. If to put on supers, I should put supers on colonies needing them. Numbers wouldn't help. If I went to take off honey, numbers wouldn't show me its location. It is the same with all kinds of work—it should be self-evident.—Review editorial.

FEEDING WATERMELONS TO BEES.

The editor of L'Apicoltore once fed 1,500 watermelons, many of which were unripe (worth in all $19.50) to his apiary of 100 colonies, from the middle of August to the end of September, when there was an absolute dearth of forage. It would have cost him three times as much to have fed honey or sugar. The bees did well on their food, and even stored a few pounds of surplus, which was of good body, but little colored, and very agreeable in taste. Twenty or more a day were fed, according to size. He does not say whether the bees wintered on that food, but it is to be presumed they did, for the next season, though there was a little flow of honey, he again fed watermelons 'to complete their winter provision,' from which it would appear that it did not hurt them. Care was taken that the juice they obtained was fresh every day. He noticed that they voided the watery portion during their return to the hive, at a distance of only a few yards from the feeding place. Before feeding the fresh melons, he had tried boiling the pulp with a little water, but the bees took little notice of it.—F. L. Tompson, in Review.

CALIFORNIAN "BITS OF NECTAR."

Notw thstanding the cool May, which lessened the honey crop in Southern California not a little, the harvest the past year has been very satisfactory. We have advices from five counties in Southern California which give a yield of over 100 pounds per colony in large apiaries.

Mr. Hubbard, of Riverside, secured the past season a large crop of orange honey. The flavor of this honey is very excellent, and no doubt but that the large orange groves of Southern California will aid much in placing this region where it rightly belongs, at the head of the honey-producing sections of the world.

There were two very bright suggestions in the able address of Mr. Harbison at the San Diego Institute. The fact that many valleys in Southern California are valuable for honey production, and for little else; and that it is easy to secure large areas of black or ball sage at small expense, which he had actually proven by his own experience.

The discussion as to the relative merits of large and small hives which has long been going on in the bee-journals, seems as far from settlement as ever. No doubt much depends upon the locality and the kind of honey produced. In regions of great honey-flow and especially in case extracted honey is produced exclusively, large hives will be most in favor; while in working for comb honey, especially in regions of light flow, small hives will doubtless give the best satisfaction.

We notice that the bee-escapes which enable the bee-keeper to free the surplus cases of bees without the necessity of brushing them off the combs, are coming into general use. This is not strange, as their use saves a good deal of time. Mr. Dayton, of Florence, suggest another advantage in their use: the bees may be kept in localities where otherwise it would be impossible to place them.

Mrs. W. E. Clarke, of Bloomington, has less than 100 colonies of bees and yet she has extracted over 10 tons of honey the past season. This is over 200 pounds per colony, and at five cents per pound would give an average of over $10. The total proceeds from the apiary will be something over $1,000. Mrs. Clark did all the work herself, in addition to the regular work of the household. Can Florida, or any other State beat this record? And yet this is not regarded as a first-class year in bee-keeping.—Prof. A. J. Cook, in Rural Californian for September.

BLACK VS. YELLOW BEES.

Mr. Chambers remarked that breeding for color has ended in failure. To a large extent the working qualities of the bees had largely been sacrificed for the mere idea of prettiness. It had been averred that the black bees were not as good honey-gatherers and were more inclined to swarm than the yellow race. Mr. Beuhne stated that black bees were quite as industrious as the yellow bees but not so prolific. They were, however, better adapted to stand cold and wet. The hybrid combined most of the desirable points required, being both prolific and hardy. Black bees build better looking comb than Italians.

Mr. W. Symes said that his earlier experiences had been with black bees, but he found them subject to foul brood, so much so that he almost despaired of getting rid of it, but since he introduced Italian bees the disease had gradually disappeared and now ceased to trouble.

Mr. Bolton agreed with the last speaker regarding foul brood.

Mr. Russell preferred the hybrid bees. They could be handled easily and quickly, and were not so difficult to get off the combs as the Italian. The black bees were without doubt more liable to disease than Italian or hybrid.

Mr. J. T. Adams preferred hybrids for honey-gatherers, but drew the line at the first cross.

Mr. Bennett bore evidence to the superior qualities of the yellow bees in resisting disease, giving the result of some experience in endeavoring to inoculate Italian bees by feeding with honey taken from a foul-broody colony.

It was agreed on all hands that the points of excellence in the matter of resisting disease were with yellow race of bees, giving them, therefore, a superior place.—Australian Bee-Bulletin.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

Ten-Frame Hives—Making Comb Foundation—Father Langstroth.

The honey crop is very short in this section. There was but little white clover, and the weather did not permit bees to work to much advantage in the fore part of the season. Old bee-keepers say that they have never known so much swarming. My bees did better in that respect than most others during the spring, but they made things lively when the swarming-mania struck them, about the middle of summer.

TEN-FRAME HIVES.—Can any one tell the harm that the two outside frames do in a 10-frame hive, even if eight frames are enough for the queen—especially, if the said outside frames are well filled with honey, being mere dummies, thus reducing the working part of the hive to eight frames? The two extra frames of honey are ever standing ready, quietly awaiting the time when they may save the colony from starvation during a honey-famine; and are ever present to encourage early breeding, by guaranteeing a sufficiency for present needs, and enough to last until the honey-flow. They may cost a few pounds of honey when the swarm is filling the brood-chamber, but is not the moral effect worth the cost? After the excessive swarming I have just had, I would like to know that *every* colony had two well-filled frames of honey in reserve.

HOME-MADE FOUNDATION.—It seems, to judge by the answer to query 987, that bee-keepers cannot afford to make their own foundation. Yet, I find it quite convenient to have a mill, and about every other year make up all the wax that I can get hold of, for I cannot afford to muss with a little. I have a Pelham mill, which is so easily worked that the milling of the sheeted wax is a small matter; but I cannot say as much for the dipping of the wax-sheets, for it is one of the

gummiest, mussiest jobs that a man often gets into. Let the inventive genius find a better way to make wax-sheets, and the answers may, in time, be different.

One advantage of owning a mill is, that you learn to care for all scraps of wax, which soon makes a large show. Another is, you will be apt to use more foundation when you have it plenty, and know that you can replace it with cost of wax and some labor.

What I have said about sheeting the wax does not apply to narrow foundation for supers, as it can be dipped very well in a gallon tin bucket set in a six-quart bucket with hot water between. I tried that way once when I did not want to make enough to use a tank, and it was the easiest way I ever made foundation. It is not necessary to have two sizes of mills, as some would have you think; that is, if you have such a mill as the Pelham, that leaves the walls of the cells soft, no matter how close you make the rolls. I have made foundation so thin, on my 10-inch mill, that it cannot be fastened into sections well, which shows that one mill is enough, as it will make from the thickest to the thinnest.

It looks odd to me to read of men now making the discovery that foundation with thick, soft side-walls can be made on rolls, and that it is best, after having used that very kind of foundation for years.

THE LIFE OF FATHER LANGSTROTH.—Our bee-literature will remain incomplete as long as we are without a fair-sized volume giving the life and times of L. L. Langstroth. The biography of that noble man would be read with avidity by the bee-keeping fraternity. His reminiscences published in Gleanings, proved to be rich mental food for his admirers. It is with pleasure that bee-keepers receive the announcement that he will again resume his literary labor. Would it not be a good idea for some of our scribes to secure from him, while he is yet with us, such data as will be needed to complete his biography? If he should live to complete his reminiscences, so much the better; if not, it could be completed afterwards.

Glenville, Ky. HUGH L. LYNN.

[Referring to Mr. Lynn's last paragraph, I may say that I talked with Father Langstroth, at Toronto, on that very subject. He promised to prepare such a work as rapidly as possible, and I believe he is writing upon it now.

As mentioned on the editorial page of this number, Father L. is now resuming his reminiscent articles in Gleanings, and, by a mutual arrangement, they will also be printed in these columns. All may look forward to something fine, as Father Langstroth is just eager to do his best. He told me he was never better able to use his mind and pen than now.—EDITOR.]

CANADIAN BEEDOM.

Fertilization of Strawberries.

While this topic is up for discussion, it may not be amiss to quote what Cheshire says on the subject in his book on "Bees and Bee-Keeping," Vol. I, page 326:

"If we look at a strawberry, which is of a similar type to the foregoing (raspberry), we find a vast number of (popularly) seeds (really *achenia*) studding its surface. Every one of these possessed a style and stigma, and has had pollen conveyed to it by the action of insects, bees mainly. When the bee settles, she, in her circular walk, rubs from her body on to the stigmas, pollen brought from another flower, as in the raspberry, for the stigmas are receptive before the anthers have begun to dehisce. The fertilization, as before, determines nutrition to the part, and the flower-stalk, which forms the strawberry, becomes a luscious parenchyma. But if any stigma remains unpollinated, no development occurs at that spot, and here the strawberry continues hard, shrunken and green, even when the fertilized portion is fully ripe. We must all again and again have seen illustrations of this, from which we learn that every strawberry requires from 100 to 200, or even 300, distinct fertilizations for its perfect production."

Poetry on the Italian Bee.

I clip from The Outlook for Aug. 17, a choice poetic effusion on the Italian bee, addressing it "O orange-banded bee!" which, if the author's name had not been appended, I should have been inclined to attribute to Hon. Eugene Secor. It is worthy of a place in the American Bee Journal, and in that collection of bee-poems which somebody will surely give us in the near future. License of poetry must be allowed here and there, especially in the allusion to the "trembling spider," which doesn't tremble worth a cent, but rather chuckles at the hope that the bee's wing may get entangled in his "gauzy tunnel," so that he may make a meal of it! Here is the poem:

APIS MATINA.

O orange-banded bee,
Impetuously humming,
You bring sweet news to me
Of summer coming!

Here in my garden-house,
Beside a lilac border,
I, like some prisoned mouse,
In sick disorder,

Bewail the darkened skies,
Pray that the flowers smell sweeter,
Wish all things otherwise,
Slower or fleeter!

You enter with a hum
Of warlike trumpets blowing,
You lead the months that come
And chase them going;

The trembling spider stares
Deep in his secret funnel,
Glad if your rude wing spares
His gauzy tunnel.

Softly, more softly, friend!
Why such a furious pother?
Let speed and leisure blend,
Not slay each other!

So swift your clear wing beats,
With hum melodious noising,
A floating aureole fleets
Around you poising!

And where you hang in air,
The dust, the small things under,
Whisk swiftly here and there
In your soft thunder.

O furred and banded bee,
So busy, so decorous,
Would that my melody
Were as sonorous!

Would that my days were spent
In making sweet provision!
Would that I came and went
With like decision!

Old minstrel, ere you go,
To cheer the cheerless weather,
Come, let us softly blow
One stave together!

—*From Arthur Christopher Benson's "Lyrics."*

Notes on Bee-Forage.

Mr. B. Taylor, on page 540, says that he and "many others in different States" were mistaken in supposing that the hard freezing, late last spring, had destroyed the basswood bloom. Many trees on the hills bloomed, and some in low places, where freezing was hardest. I have not seen a basswood bloom the present season, and believe it was all killed along the parallel of 43° in the Province of Ontario. If there were any favored spots where basswood bloom was found along the parallel named, and north of it, bee-keepers would do well to report the pleasing fact. White clover and Alsike had very small heads which seemed devoid of nectar. Scarcely a bee appeared to be working on them. The Canada thistle, improperly so-called, yielded its usual quota of fragrant nectar. It seems to be unaffected by any kind of weather, hot or cold, wet or dry. If it were not such a pesky weed, it would be worth growing as a honey-plant. But as Henry Ward Beecher well observed years ago, whenever we find good use for it and begin to cultivate it, insect foes will attack it, blight or mildew will strike it, and it will lose its persistent vitality.

I cannot tell, for the life of me, what the bees have found to live on in my field the present season. They must have "struck ile" in some unwonted quarters. My bees have all "stocked up" sufficiently for winter, except one colony which will need feeding. It was weak in early spring and had to be "coddled" with sugar syrup. Having a fine queen, it was worth nursing. It is now strong in bees, though short of stores. A few colonies only have given any surplus.

Viper's bugloss, referred to in this department on page 459, has picked up wonderfully since the drought was broken, and is taking another fit of blooming. At the date of this writing (Aug. 28) the bees are very busy on it.

I sowed a trial patch of Japanese buckwheat this season, which is now getting off bloom, but I have not seen a solitary bee at work on it. The flowers emit no fragrance. What is the matter? Was my seed spurious? Or are there different species of the Japanese variety? While the bees avoid my patch, they are busy on an acre of common buckwheat near by.

This matter of bee-forage will bear more discussion, and it is to be hoped there may be a more general comparison of notes about it. It is especially desirable that we should get full reports about crimson clover from localities in which spring sowing of it has been tried.

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Editorial Budget.

R. F. Holtermann, I regret to learn, has been sick with typhoid fever in Montreal, Canada, since the North American convention. A postal card received Sept. 23 said he expected to be at home in Brantford very soon. The convention was probably too great a strain upon Bro. H. It certainly was no fun to preside over the last session.

Hon. Geo. E. Hilton, of Fremont, Mich., has recently been contributing some exceedingly interesting and practical illustrated articles on bees, to the Michigan Farmer. In last Gleanings, Mr. Hilton and his two bright-faced children are shown, in connection with a biographical sketch principally about Mr. H.'s political career. He is one of the most prominent "bee-keeper legislators" in this country, and has done some excellent work in the Michigan legislature.

Beeswax seems to be in great demand these days. I do not remember the time when there appeared in the Bee Journal so many calls for it as there are just now. It will pay to save up all the cappings, old comb, etc., in the apiary, and turn them into wax. These are "economical times" in which we live, and it behooves every would-be successful bee-keeper or farmer, to see that *nothing* is wasted. Do you know that three or four pounds of good beeswax will about pay a year's subscription to any one of the best bee-papers, nowadays?

Father Langstroth is again able to use his pen, and on page 631 of this number of the Bee Journal will be found a short article written by him. He expects to continue his interesting reminiscences in Gleanings for October 1, and they will also appear in the American Bee Journal. He had begun them several years ago, but was suddenly prevented from completing them on account of the return of his severe head trouble, which afflicted him until about two months ago. He is now quite well again, and is overflowing with reminiscent facts and incidents.

For the New North American.—Suggestions are always in order, I believe.

On my return trip from the Toronto convention I fell to thinking about the new society to be formed by uniting the North American and the Bee-Keepers' Union. As I gazed out of the car window while speeding along in the beautiful early morning, two ideas came to me, which, if adopted, I believe would contribute a good deal to the future success of the amalgamation. The first was this:

Hold the annual meeting at the same time and place the Grand Army of the Republic holds their yearly gathering. This year they met at Louisville, Ky. Next year they go to St. Paul, Minn.

Right here some one may ask: "Thought the bee-convention for 1896 was to be held in Nebraska?" Yes, sir, that was the "thought," but there's no use in concealing the fact that unless reduced railroad rates are *assured before* the meeting, there isn't going to be much of a gathering. By not being able to secure the lower rates on the return trip from the Toronto meeting, some one told me it meant a loss of $300 to those present. Now the G. A. R. *always* succeed in getting the reduced rates—there's no question about it with them—*they get it.* I believe this year it was only *one cent per mile* each way. Think of it! That means that the rate from Chicago to Toronto (500 miles) and return would be only $10, while the regular rate is $22.40 for the round trip.

Another may say, "Oh, there's always such a crowd where the G. A. R. meets!" True, but we would stand just as good a chance as they. We could arrange in *advance* for hotel accommodations and hall, just as we did for the Toronto meeting.

Again, many of our bee-keepers are old soldiers, and they could thus "kill two birds with one stone"—could take in both meetings on the one trip.

Somehow, I feel that the North American can't afford not to take advantage of this suggestion, if it is ever going to get the attendance it ought to have at its annual meetings.

Suggestion number two is this: It seems to be the desire that membership in the amalgamated society be secured the same as it now is in the Bee-Keepers' Union—a permanent membership: and that voting, etc., be done by mail. It has also been the dream and hope of some of the leaders in the old North American, that it become a representative body. But nothing very satisfactory has ever been attained along that line. Now my way of making the North American a representative society is this:

For every (say) 50 members in any one State or Province let the society pay the actual railroad expenses of one delegate. If a State or Province has 100 members, then two delegates could be selected from their number, and their car-fare be paid by the society. Delegates to conventions would be selected by the membership in each State or Province, a printed list of all the members being mailed to every member of the society at the time of the annual election, and all delegates and alternates to be voted for at the same time. Proper voting blanks should be furnished, the same as the Bee-Keepers' Union does now.

It might be that for every 25 members in a State or Province, the society could afford to pay the milage for one delegate. I merely mention this. Possibly it would be better to say 50 at first, and then later to drop to 25, if it is thought advisable. Or, if a State or Province had only 25 members in the society, then pay half the milage expense of one delegate. If 75 members, then pay all the milage of one delegate, and half of that of a second.

I think there would be quite a good deal of rivalry worked up among the States and Provinces if this plan were started. And I firmly believe that very soon nearly every State or Province would be entitled to at least one delegate. Then you'd have the representative society so long hoped for. Of course, the delegates would represent *States or Provinces,* but I've no doubt they'd soon work up State and Provincial organizations, and possibly county. But suppose there would be an average of only one delegate from each State or Province, why, that would assure a convention of about 50 of the very best and brightest bee-keepers in the land! They, with

others, and the local attendance, would insure a fine meeting every time.

Now, I throw out the foregoing, first, for the consideration of the committee, who have in hand the forming of a basis of union for the two existing societies. Then, if they think well of my suggestions, they could be discussed along with the other matters that will be incorporated into the new constitution, which the aforesaid committee will likely soon submit to the members of both existing societies.

The second suggestion I have not given in detail, but sufficient, I think, so that those interested will easily see whether or not the idea is practical.

The Most Promising Fall is this, says Mr. B. Taylor, of Minnesota, in the Farm, Stock and Home, for Sept. 15. Here is his paragraph referring to it:

This is the most promising fall for the apiarist for five years. Honey still continues to come freely, and hives are full of young bees. We will give our colonies the best care this winter, and next spring, in full confidence that they will winter well and be ready to gather a big crop of white honey next year.

Sweet Clover seems to be causing Somnambulist, of the Progressive, quite a good deal of worry; or at least the laws ordering its extermination in some States are greatly disturbing the otherwise peaceful slumbers of our beloved Sommy. Never you mind; when those benighted States come to fully appreciate the true value of sweet clover, they will hasten to repeal such odious laws, and probably offer a generous bounty to those who succeed best in growing sweet clover, which is already such a fine honey-yielder, and seems destined to be a splendid forage-plant for many kinds of farm stock.

Our Canadian Friends are very fortunate in two or three things. One of them is in two such noble men (yes, noblemen) as Hon. John Dryden and Pres. Jas. Mills. I must confess that, so far as I know, we over here have no such prominent men in high authority who are so deeply interested in the success of bee-keeping in the United States. Here is what the last Gleanings had to say about Messrs. Dryden and Mills.:

Ontario bee-keepers are to be congratulated for the strong and able allies they have in Hon. John Dryden, Minister of Agriculture, and Jas. Mills, President Agricultural College. Their able addresses at Toronto showed their deep interest in our chosen pursuit, and pledged co-operation as they have given it in the past. With such friends in high stations it becomes an easier matter to obtain government grants to help make an organization of bee-keepers valuable.

I think on at least this score, we have good cause to be jealous of our Canadian bee-brethren. But let's all congratulate them first. They deserve it.

Prof. C. V. Riley, for so many years at the head of the entomological department at Washington, died Sept. 14, from the effects of an accidental fall from his bicycle, striking his head upon the street curbstone. Those who attended the World's Fair bee-convention, will remember him, as he there delivered a short address. He also read an essay at the North American convention held in Washington, in 1892. An exchange has the following paragraph concerning Mr. Riley's life and work:

Prof. Riley was born in London, Sept. 18, 1843, and was educated in Germany. He came to America in 1860, and settled on a farm in Illinois. He served throughout the war in various regiments. In 1868 he became State Entomologist of Missouri, holding it until 1877, when he was appointed Chief of the United States Entomological Commission, under the Department of the Interior, for the purpose of investigating the Rocky mountain locust. He was made Entomologist in the Department of Agriculture in 1878, but soon returned to his work with the Commission, for which he edited and wrote the more important original and practical portions of its four large reports from 1877 to 1886. In 1881 he organized the Entomological Division of the Department of Agriculture, and continued in that position until his retirement, about a year ago. He held the office of Curator of Insects of the United States National Museum, to which he afterwards presented his private collection of more than 115,000 entomological species, including about 15,000 species. He was the author of various scientific books. Like the great naturalist Agassiz, whom he resembled in many of his personal characteristics, he was a skilled draughtsman, and illustrated his own researches with his pencil.

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Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

A Question on Italianizing.

My bees are hybrids, and I want to Italianize them. If I should buy an Italian queen, rear queens from her this fall and mate them to my hybrid drones; rear queens next spring from my old queen, and mate them to drones from this year's queens, would their progeny be pure Italian? W. D. C.

ANSWER.—Some think such drones as you speak of are not pure, while excellent authorities insist there is no taint of impurity about them. I'm not going to get a hornet's nest about my ears by saying which is right, but I'll just whisper in your ear that if you follow out the program you have outlined you will have bees that no one can find anything wrong about. Remember, however, that if there are other bees within two or three miles, drones from them may meet your queens.

Sowing Alfalfa—Wintering Bees, Etc.

1. When is the best time to sow alfalfa?
2. How would you advise wintering bees in this latitude—on the summer stands or in a cellar?
3. Where can I get alfalfa and sweet clover seed?

Mayking, Ky. J. J. W.

ANSWERS.—1. Alfalfa is one of the clovers, and although I cannot say positively, I should think it would be well to sow at the same time as red clover. I wouldn't try on too large a scale if you know of no one who has tried it in your locality.

2. I would rather have the advice of those who have wintered successfully in your immediate locality, but if I couldn't have that I should try wintering on the summer stands. I've some doubt whether any one winters his bees in the cellar in Kentucky, but I will be glad to be corrected if wrong.

3. From any of the leading seed firms, or from the A. I. Root Co.

Queen-Excluding Honey-Board—Spacing Frames.

Do you think it advisable to use a queen-excluding honey-board between the brood-nest and the extracting super or hive? Do you think bees will store as much honey in the upper story as though the queen has free access? I have never used them till this year, on part of my hives, but it rather seems to me that they don't do quite as well as where they are not used, although I have been bothered considerably with brood where they are not used, for I never extract any unsealed brood.

One thing I noticed a few years ago. I had some bees

dle out in the spring, and f set the hives on top of other hives with bees to extract out of, and did not close the entrance, so that left an entrance between the brood-nest and extracting-combs, but they seemed to store more honey above than where there was no entrance between; so of late years I have mostly left an entrance between them, and certainly believe they store more honey.

I see a good deal of argument about the spacing of frames. In the last 18 years I have transferred a good many colonies from box-hives to frames, and I invariably found the combs just 1⅛ inches from center to center, so I concluded the way the bees make it is the correct distance to space frames for brood. I also conclude that a large hive produces the best swarms and most honey, if they have anything like a good Italian queen. O. E. C.

Lemoore, Calif.

ANSWER.—I run almost entirely for comb honey, and I have no excluder between the brood-nest and the sections. It isn't needed, for it is a rare thing that a queen troubles the sections. But if I were running for extracted honey, I should want excluders. The queen will almost certainly trouble the extracting-combs with brood, and it doesn't do the brood any good to be put through the extractor, neither does it do the honey any good to have brood mixed with it. I am inclined to think that if you watch the matter long enough you will find that passing through the excluder does not perceptibly hinder the bees in their work.

I'm not sure whether you are right that bees will store more honey if they have an entrance between the brood-nest and the surplus apartment, but I am inclined to the opinion that it may be a good thing. In hot weather it gives them that much better chance for ventilation.

As to the spacing of frames, where bees are left to themselves, as in box-hives, various distances have been reported, some less than 1⅛ and others more. If you have found them all 1⅛ without variation, I think you have found an unusual ot

Rearing Queens.

I am at a loss to know what to do with one of my colonies. I wanted to increase, so I took a few frames of brood, honey and adhering bees, and put it in an empty hive and then set it in place of the parent hive, expecting them to rear a queen. They started a number of queen-cells, and sealed them. Three weeks after, I looked for a queen and eggs, but could not find any. I then gave them another frame of brood; more queen-cells were sealed, and in due time I again examined them; still no queen. So I gave them a queen and looked at the hive a few days after, and found that fully two-thirds of the bees had swarmed with the queen. What would you advise? J. B. D.

New Orleans, La., Sept. 3.

ANSWER.—If I were sure it wouldn't rouse your ire, my first bit of advice would be, never again to do such a foolish thing as to throw the whole strength of the colony upon a small amount of brood, intending them to rear a queen, leaving the queen with nothing but the young bees.

As matters now stand, possibly the best thing is to let the bees entirely alone. Very likely they have a young queen of their own rearing, and in due time will come out all right, only there is danger they may be pretty weak, in which case they would be greatly helped by some sealed brood.

Oil Cans and Galvanized-Iron Tanks for Honey.

1. Are galvanized-iron tanks quite all right for keeping extracted honey?

2. Can empty kerosene oil cans be used as a suitable package for honey?

3. What is the best method of cleaning kerosene oil tins before using them as honey-packages, if only a small hole (say an inch in diameter) be made to get the oil out?

S. N.

ANSWERS.—1. Last year this matter was pretty fully discussed in Gleanings, and the general testimony was that tanks of galvanized iron were all right. A correspondent from England, however, thought the larvæ of a colony had been injured by feeding honey that had been stored in galvanized zinc, although the mature bees were not injured. One man thought there was a disagreeable taste to the honey next to the galvanized surface. One or more said they coated the galvanized surface with wax. A sample of honey that had been stored in galvanized iron was forwarded for analysis to the chief chemist at Washington, and he pronounced it all right.

2. Oil cans that previously contained kerosene have been used to a considerable extent in California, but I think it is agreed that it is very bad economy to use them, and better to use new tin, even at the extra expense.

3. I don't know how they are cleaned, and I doubt if you will care to use them after they are cleaned.

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General Items.

Everything Came Out Right.

This is my second year in the bee-business. I had 10 colonies last spring, and have increased to 18, taking 1,000 pounds of comb honey, with a prospect of as much more. Bees came out all right last spring, with plenty of honey. Spring opened early, and they commenced well, but late frosts gave them a great backset, consequently they consumed all the stores they had, and we began to feel "blue," but everything has come out right.

This is a great bee-country, as it lies on the banks of the Mississippi river, and the lowlands are covered with untold quantities of wild flowers, such as golden-rod and many other valuable flowers, with considerable basswood, sumac and white clover.

E. B. HUFFMAN.

Homer, Winona Co., Minn., Sept. 13.

Belongs to the Mint Family.

I enclose a part of a weed or plant that I should like to know the name of, and its value as a honey-plant. The bees are working on it all day, and gather both honey and pollen from it. It grows to the height of about 18 inches, and then spreads in a very rank growth, and flowers all the time.

JAMES B. DRURY.

New Orleans, La., Sept. 3.

[As near as can be made out from the specimen sent, the plant is *Ocimum Campechianum*, with Basil as the common name. It belongs to the mint family.—EDITOR.]

Two Hives and the Results.

Last March I purchased two colonies of Italian bees, one in an 8-frame Langstroth hive, and the other in a kind of square hive (doubtless some one's would-be improvement over the Langstroth). The colonies seemed about equal in size and strength. They were placed side by side, both having the same chance. Those in the Langstroth hive, up to date, have cast one swarm, and both swarms and colony have together produced eight 24-section surplus cases of honey, while the one in the square hive cast two small swarms, and the three have produced only three surplus cases of honey—two of 18 sections, and one of 24 sections. Now, if it isn't the hives that make the difference, what is it? And if it is the hives, one can easily see which will pay best.

Next time I will tell how I watered my bees, and how I got rid of ants, which I thought at one time would carry off hives and all.

I would say to those contemplating bee-keeping: First, subscribe for the American Bee Journal; then start with the Langstroth-Simplicity 8-frame hive, and you will be on the road to "the land flowing with milk and honey." J. H. TICHENOR.

Lynnville, Wis., Aug. 29.

A Fine Report from Nebraska.

I keep about 700 colonies of bees in four different places. I have had 15 years' experience in Nebraska with bees. I had 75 colonies in my home apiary in the spring, which increased (mostly by natural swarming) to 225—100 of which I sold for $500, and I have on hand 125. Our honey-flow is not yet over, but I have in sight $500 worth of comb honey; this is about an annual average in my home apiary, and is a profit of $1,000 on an investment of $500.

I have also been renting out 30 farms in four of the best counties in the State, and on account of low prices of grain, my average income from these farms is about $300 each, after paying taxes, etc. The average value of these farms is $800 each, so you see I make more profit on an investment of

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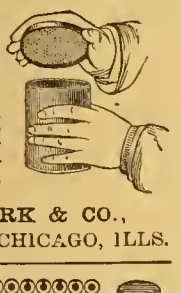

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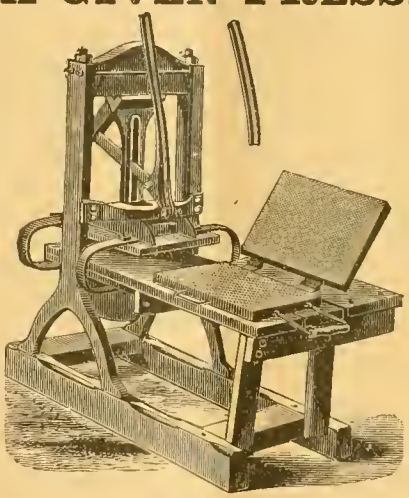

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$500 in bees than $24,000 in farms. Wheat has declined from $1.00 per bushel to 50 cents, and corn from 50 cents to 20 cents per bushel. Honey has remained about the same price—15 to 20 cents for comb honey, and 9 to 14 cents for extracted.

The dry weather in Nebraska for two years has almost ruined the clover, yet we have an abundance of honey-plants not affected by dry weather. Honey-locust, milkweed, hoarhound, wild sage, wild cucumber, basswood, golden-rod, and heart's-ease are the principal honey-plants in this State. I do not believe there is a State in the Union where bees, if properly handled, will yield a greater income than in Nebraska.

I am a professional man, and burdened with business cares, and have not given my bees more than half the attention I would have otherwise done, and I have no doubt, with proper care, my yield would have been one-half more. J. L. GANDY.
Humboldt, Nebr., Sept. 10, 1895.

Results of the Season.

I will harvest about 1,500 pounds of honey this season from 30 colonies, spring count—1,000 pounds of comb honey and 500 pounds of extracted. A. W. SWAN.
Centralia, Kans., Sept. 9.

Clover Revived by Rains.

There is no surplus honey hereaways, and but little interest felt in the bees. I had 65 colonies at the close of last winter. My neighbors sprayed in full bloom with London purple, and half of the bees failed to return, as a result. I have 30 colonies now in poor condition.

Clover is much revived by summer rains, and the outlook for a sauce in the "sweet bye-and-bye" is quite flattering.
Macomb, Ill., Sept. 13. W. M. RAGON.

Golden Bees—Uniting Colonies, Etc.

The honey-flow has been fair here; so far I have taken 1,500 pounds of extracted honey, and 50 pounds of wax. I got 270 pounds of pure locust honey, which was hard to beat as to flavor and color; 1,230 pounds was honey-dew, very dark. The fall flow has started in well. There is quite a lot of fine honey in the hives. I am running 60 colonies.

No more of your golden non-swarming bees for me. I have tried queens from different breeders. They breed up slowly in the spring, and are great robbers. I find a queen bred from a Carniolan mother and mated to an Italian drone produces fiad workers, breed up early in the spring, and are usually gentle.

I have done a good deal of uniting in the past few years, and find that camphorated moth-balls are the thing to use. Put two or three balls in the smoker and smoke both colonies thoroughly, and then unite, and if they fight, just give them a little more smoke, and they will quiet down. I have united a colony with a virgin queen, and one with a laying queen, with but very little trouble. Ten cents' worth gotten at the drugstore lasts me a long time.
Rockport, Ind., Sept. 17. W. A. FEE.

Aster—Coreopsis—Golden-Rod.

I send samples of flowers which I have noticed the bees work upon more or less, but for some cause or other they have not worked this year on them. Please publish the name of each, and what its value is as a honey-plant.

I started last spring with 11 colonies. They did very well on the fruit-blossoms, but the white clover was no good. They took the swarming-fever, and increased to 23, besides some which flew away.
Fruit, Ill., Sept. 14. WM. FRUIT.

[The plants are as follows: No. 1, white aster (*Aster multiflora*). No. 2, hibride of

Coreopsis artistosa, with some *Bidens*. No. 3, golden-rod (*Solidago Canadensis*). Bees collect a good deal of pollen from all of these plants, and the second furnishes considerable honey. Probably not very much honey is obtained from the others. The second is a peculiar plant which has become largely distributed thoughout southern and central Illinois. It is a spontaneous cross between two allied genera, and seems to be more vigorous in growth, and becoming more abundant than either of the parent forms. Both of these (that is the parent forms) belong to groups commonly designated by such names as beggar-ticks, bur-marigold, tick-seeds, devil's pitchfork, and Spanish-needles. No reason can be assigned why bees should not visit them as usual this year.—T. J. BURRILL, University of Illinois, at Champaign.]

Alsike Clover—Late Swarm.

Alsike clover is in full bloom now, and my bees are working on it. Heart's-ease and buckwheat are our main honey-plants here. We are having plenty of rain at present. I have 45 colonies of bees, from which I have extracted 1,600 pounds of honey.

Thursday, Sept. 5, I hived a fine swarm of bees for one of my neighbors. This is very late for bees to swarm here in northern Illinois, but there have been quite a lot of swarms here this fall.

Rickel, Ills., Sept. 9. JACOB WIRTH.

Mountain Mint, Etc.

Please uame the enclosed plant in the Bee Journal.

My son and I were hunting bees on the New York side of the "Berkshire Hills," near the Massachusetts line, and late in the afternoon, when bees were about done working, we came across this plant, and it was covered with bees. It grows in bunches like tansy, and the flowers are white, or nearly so. It grew in an open pasture. Perhaps there had been a house there some day.

No white clover honey here this year; some linden and some buckwheat. At present bees are working on golden-rod, and are in good condition.

ARIEL WELLMAN.

S. Berlin, N. Y., Sept. 12.

[This is mountain mint, or as it is frequently though rather inappropriately called, pennyroyal—*Pycnanthemum linifolium*. The frequent observations similar to the above, attest the fondness of bees for the plant in many parts of our country. The ability of the plant to thrive during dry seasons gives it added value.—T. J. BURRILL, University of Illinois, Champaign, Ill.]

Barnes' Foot-Power Machinery.

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23C **Joseph Erway, Havana, N. Y.**

Mention the American Bee Journal.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Aug. 25.—We are having considerable inquiry for comb honey. We have as yet received but a few small consignments. We quote: Fancy white, 15c.; No. 1 white, 14c. Extracted, 5@7c.

Beeswax, 25@27c. J. A. L.

KANSAS CITY, MO., Aug. 20.—The receipts of new comb and extracted honey is fair, the demand not large, but will increase with cooler weather. We quote: No. 1 white comb, 1-lbs., 14@15c.; No. 2, 12@13c.; No. 1 amber, 11@12c.; No. 2, 10@11c. Extracted, white, 6@6½c.; amber, 5½@6c.; Southern, 4½@5c.

Beeswax, 22@25c. C. C. C. & Co.

PHILADELPHIA, PA., Aug. 19.—New crop of comb honey is coming in more freely and generally in good condition. Demand is now beginning to spring up. New extracted is arriving in a small way. We quote: Fancy comb, 14@15c.; good, 13c.; fair, 9@11c. Extracted, 4½@5½c. It is hard to get our market to rally after the blow it received in the spring on discovering such a large amount of beeswax adulterated. We quote pure wax, 22@25c. W. A. S.

ALBANY, N. Y., Sept. 6.—Honey market opening with good demand. Receipts lighter so far this year than last, but do not look for higher prices. We quote: White comb, 14@15c.; mixed, 13@14c.; dark, 11@12c. Extracted, white, 6½@7½c.; mixed, 6@6½c.; dark, 5½@6c. Beeswax, 28@29c. H. R. W.

CHICAGO, ILL., Sep. 4.—The new crop is coming forward and sells at 15@16c. for best lots; dark grades, 9@12c Extracted ranges from 6@7c. for white, and 5@5½c. for colored, flavor and package making difference in price.

Beeswax, 27@28c. R. A. B. & Co.

BUFFALO, N. Y., Sept. 16.—Light receipts are prevailing in our market and demand is improving. We quote: Fancy one pound sections, 15@16c.; choice, 13@14c.; buckwheat, slow sales at 8@10c. B. & Co.

CINCINNATI, O., Sept. 18.—Demand is very good for all kinds of new honey, while supply is scant. We quote; Comb honey, 12@16c.; extracted, 4@7c. on arrival.

Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. M. & S.

CHICAGO, ILL., Aug. 23.—Fancy white comb honey (1-lbs.) in nice, clean packages sells at 16c.; other grades of white honey, 14@15c.; amber, 13@14c. We are having a good trade in extracted honey, selling light amber and white at 6@7c.; dark, 5@5½c. depending on quality and style of package. Early shipments to market advised so as to permit of sale before cold weather sets in.

Beeswax, 28c. S. T. F. & Co.

NEW YORK, N. Y., Sept. 11.—New crop of comb honey is arriving and while the receipts from N. Y. State are light, we are receiving large quantities from California. Had two cars of choice comb and have several more to follow. On account of warm weather the demand is rather light as yet. We quote: Fancy white, 1-lbs., 15@16c.; fair white, 12@13c. No demand as yet for buckwheat and dark huney. Extracted is plentiful, especially California and Southern. We quote: California, 5@5¾c.; white clover and basswood, 6@6¼c.; Southern, 45@55c. a gallon.

Beeswax in fair demand and firm at 28@29c. H. B. & S.

NEW YORK, N. Y., Sept. 23.—The market for comb and extracted honey is now open. Comb honey is not arriving as freely as expected, presumably on account of the prolonged heat, but it is selling very well, considering the hot weather we have had this time of the year. Of extracted honey there is quite a supply on the market; California and Southern with a fair demand. We are quoting comb honey to-day as follows: Fancy, 1-lbs., 15c.; 2-lbs., 14@15c.; white, 1-lbs., 13@14c.; 2-lbs., 12@13c.; fair, 1-lbs., 11@12c.; 2-lbs., 10@11c.; buckwheat, 1-lbs., 10@11c.; 2-lbs., 8@9c. Extracted, clover, 5@7c; buckwheat, 5@5½c.; Southern, 50@60c. per gallon.

Beeswax is in fair demand, with supply limited; average stock, 27@28c.; fancy yellow, 29c. C. J. & B.

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Convention Notices.

MINNESOTA.—The next meeting of the Southern Minnesota Bee-Keepers' Association will be held at Winona, Oct. 15 and 16, 1895. All members are urgently requested to attend. All bee-keepers and others interested are cordially invited. E. C. CORNWELL, Sec.

Winona, Minn.

WISCONSIN.—The Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting at Platteville, Wis., Oct. 8 and 9, 1895. "Come, every one." Don't get discouraged if we haven't got a crop of honey. We will have a good time at Platteville, just the same. Bring your wives and daughters with you. Many interesting subjects will be discussed. M. M. RICE. Sec.

Boscobel, Wis.

UTAH.—The Utah Bee-Keepers' Association will hold their semi-annual meeting in Room 54, City and County Building, Salt Lake City, Oct. 5, 1895, at 10 a.m. All are invited. Come and have a good time. Many interesting subjects will be discussed. Among other questions to be considered will be Markets and Transportation. A union of interest in the industry is much desired.

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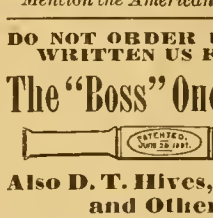

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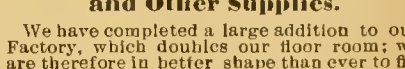

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Query 990.—In uniting colonies, both queens being equal and allowed to fight to a finish, is the one that comes out victorious injured in the fight?—J. P.

Mrs. L. Harrison—Not often.

W. R. Graham—I think she is.

W. G. Larrabee—I don't know.

Eugene Secor—I think not, as a rule.

Chas. Dadant & Son—Yes, sometimes.

G. M. Doolittle—Not that I ever noticed.

Rev. E. T. Abbott—She may be, and she may not.

J. A. Green—Not usually. Doubtless sometimes she is.

P. H. Elwood—I have never known her to be injured.

Prof. A. J. Cook—I have never seen evidence that she was.

E. France—I have had them both killed, but not commonly.

J. M. Hambaugh—Not usually, though occasionally they are injured.

B. Taylor—I have never known any facts to prove she was harmed.

H. D. Cutting—Not always. It is best to remove one of the queens and take no chances.

Dr. J. P. H. Brown—Sometimes she is. Hence, never take the risk, but cage the best.

J. E. Pond—Yes, so far as my own experience goes. I should not risk it, though, with a valuable queen.

W. M. Barnum—Occasionally. Look her over; keep an eye on her "wise subjects." They will soon tell you.

C. H. Dibbern—I can easily see how this might happen, but I have never had a case of this kind come to my knowledge.

Dr. C. C. Miller—I doubt if there will be anything of the kind. But in a case where two queens do fight, I think the victor will come off scot free.

Mrs. J. N. Heater—Yes, more or less. Possibly both queens will be balled by the bees, and one or both killed. Better cage the best one, and introduce her the same as a strange queen.

Jas. A. Stone—I would be afraid to risk it, as it seems to me not impossible in some cases both might be killed; just as we have known of two men killing each other at the same time.

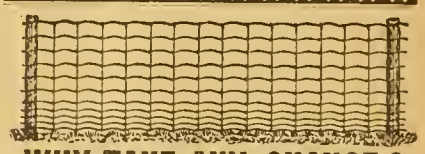
J. M. Jenkins—Probably not, unless balled or injured in some way by the workers. The combat between queens is short, and is decided in favor of the one that first stings her opponent.

R. L. Taylor—It seems to be a salutary provision in Nature that two queens in combat cannot both be in a position to sting the other at the same time, and as the reception of a sting instantly ends the fight, only one is ever injured.

G. W. Demaree—Years ago I learned by experiments carefully conducted, that it is a rare occurrence for both queens to be injured in a mortal combat. But there are exceptions to all rules. A neighbor of mine—a perfectly reliable and practical man—told me that he put two laying queens under a glass tumbler and both of them were killed outright in their combat. I prepared a glass-covered cage purposely to test this matter, both with virgin and laying queens, and have not yet met with a case of death or injury to both combatants.

Rev. M. Mahin—Sometimes she is. But the greatest danger is in the balling of the queens by the workers. I am of the opinion that when two colonies are united, the queens rarely "fight to a finish." I had one case in which the surviving queen had both of her wings gnawed off to the merest stubs, and it was evidently done by hostile workers.

Allen Pringle—In the first place, if both queens were "equal" the fight would be a "draw," in sporting parlance. But when they are *unequal*, and one *triumphs*, it does not follow that she comes out unscathed. It is but reasonable to suppose that in a "fight to a finish," where the combatants are nearly equal, or even quite different, the survivor is more or less injured. At any rate, that consideration has always been sufficient with me to prevent a "fight to the finish" between queens.



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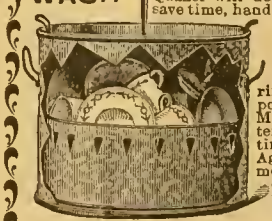

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35th Year. CHICAGO, ILL., OCT. 10, 1895. No. 41.

Report of the Proceedings

OF THE

Twenty-Sixth Annual Convention

OF THE

North American Bee-Keepers' Association,

HELD AT

TORONTO, Ont., Sept. 4, 5 and 6, 1895.

W. Z. HUTCHINSON, SEC.

(Continued from page 630.)

SECOND DAY—THURSDAY AFTERNOON SESSION.

First upon the program came an essay by Mr. S. T. Pettit, of Belmont, Ont., on

Introducing Queens.

Upon the subject of introducing queens, am I expected, after all the volumes that have been written and spoken upon that topic, to write anything new?

It has often been said that an essay on apiarian subjects should be more calculated to draw out discussion than to exhaust the subject. Well, the essay in hand I hope will meet that view, for, indeed, I myself want more light upon the subject.

I shall aim to set forth what seems to me the cause or causes of imperfect introduction. If we once fully understand the real causes, then we are in a position to seek a remedy.

There are some characteristics in bee-nature so similar to those in human nature that if we study ourselves it may help us to understand why queens are often accepted under protest, and then treated as heathen Chinamen and subsequently abused, tortured, and finally put to death, or superseded, which ultimately means the same thing. In this way, because of imperfect introduction, many valuable queens that are received in good condition are cruelly disposed of, after the apiarist had decided that they were safely introduced. I know by repeated experiences of that kind, the keenness of such disappointments. I believe it will pay us to look more closely into this matter.

I do not believe the fault is all with the bees. I apprehend that the queen has strong, natural motherly affections and yearnings for her own family and "blood relations," and cares not to leave them and trust herself to the tender mercies of her natural enemies; for all worker-bees and queens seem willing to destroy all other worker-bees and queens from off the face of the earth, and they all understand this depravity in bee-nature, and hence the fighting spirit—the principle of self-preservation is aroused in both queen and bees when thrown together without due precautions.

The bees fear the queen, and the queen fears the bees, but this mutual mistrust is not the only element of discord and danger.

The queen's love for her own, however great, is equalled by the loyalty of all worker-bees to their own queen; and this laudable principle, coupled with fear, are two standing difficulties to successful introduction. But these are not all. I believe it is a recognized fact that generally, if not always, the stronger a man, a society or a company, a mob or a nation, or a hive of bees, the more self-confident and self-assertive each becomes. Now these I believe are the difficulties to be removed. Can we do it? And if so, how? are the pertinent questions. I will give what I think more successful in a good honey-flow.

I may be allowed to interject right here that I believe more queens are lost or injured through imperfect introduction than through transit; a poor queen is often *made so* by imperfect introduction. I have succeeded best by selecting or preparing for the purpose a weak colony; in this, as above suggested, their self-sufficiency is not so great, and they are more yielding than a strong colony.

Now having your queen on hand, remove the old queen from the hive, and immediately place the new queen in a clean cage all by herself, and place her in a clean, sweet, airy place (not in your pocket) out of the reach of all bees.

Now watch your bees, and they will soon manifest their loss. In many cases their grief and consternation will be very manifest. Now at this crisis the queen will be just as lonesome and forlorn as these queenless bees, and now is the time to liberate her. Place her within about a foot of the entrance. The queen will know by the commotion and mourning of the bees what is the matter; she will understand their frame of mind, and her fears will give place to hope; her lonely, forsaken condition prepares her to welcome the bees, and they, in their forlorn condition, and perceiving the queens' humility, will gladly reciprocate her overtures of peace and good-will; then they will escort her to their home and kingdom, and proclaim her queen of all the realm.

> Then their mourning and sadness
> Is turned to rejoicing and gladness.

A queen may be successfully introduced to a new swarm in the same way. If the condemned queen is clipped, cage her when the bees swarm; then place the new hive on the old stand and remove the old hive some distance away; now place the old queen at the entrance of the new hive, and when the bees are returning rapidly, remove the old queen. When they miss her they will manifest their loss in a marked degree. Having prepared the new queen as in the other case, let her run in as above, and you will see how quickly the bees will quiet down and go to work.

Some bees that have brood will fail to manifest their loss; in that case it is better to cage the queen in the usual way.

But, after all, the plan of placing a valuable queen with just-hatching brood never fails to give satisfactory results.

Having selected the combs of brood, and liberated the queen in the hive, I place it on top of a fairly strong colony, with *two* frames of wire-cloth between them. This arrangement enables me, without danger from other bees, to place the hive where I wish it to stand. If some new capped honey is present, and water provided, breeding will go on at a lively pace.

All changes in the practice of bee-keeping should be made with due caution. There is so much in *knowing how* to do a thing. S. T. PETTIT.

L. A. Aspinwall—Much depends upon the honey-flow. Late in the season, when but little honey is coming in, it is more difficult to introduce queens. I have used with the best success a cage made of a small frame-work upon the sides of which is tacked some cheese-cloth. The cage is supplied with food. The queen is released by the bees gnawing through the cheese-cloth. Simply remove the queen and put the new one into this cage, and the workers will at once begin the work of releasing her, which will require at least five hours. They

are able to feed her before she is out, and the feeding leads to an acquaintance. By this method I have had a queen introduced to three different colonies inside of 24 hours.

R. A. Marrison—I give the bees a thorough smoking with dried grass, and then put the bees in a cage from which the bees can release her inside of five hours. The smoke gives a strong odor to the bees, queen, and hive.

J. T. Calvert—I visited Henry Alley this summer, and he introduced virgin queens to nuclei, filling each nucleus with smoke, putting in the queen, and then stopping up the entrance with a plantain leaf. The leaf wilts and releases the bees.

Mr. Aspinwall—Mr. Alley uses too much smoke. I think we should use as little smoke as possible.

Next came an essay by Dr. C. C. Miller, of Marengo, Ill., on

The Amalgamation of the North American Bee-Keepers' Association and the National Bee-Keepers' Union.

Shall there be a union of the Union and the North American? Should the North American Bee-Keepers' Association ask this question, the Bee-Keepers' Union might answer:

Dr. C. C. Miller, Marengo, Ill.

"Mind your own business. Better not discuss publicly whether there is to be a 'wedding' till you find out privately whether I'm willing to marry."

And yet, and yet. The two organizations have been closely identified, their interests should be the same, their membership is to some extent the same and should be more fully the same, and more members of the Union can be found together at one time at a North American convention than at any other time and place. Indeed the nearest the Union has ever come to having a meeting has been at the meetings of the North American, and aside from that there has never been the semblance of a meeting of the Union. So there seems nothing particularly inappropriate to talking the matter over at this convention.

I am asked to say something introductory, and I'll be brief. As a member of the North American, I should say to the Union: "If you'll join hands with us, we think we can do more for the interest of bee-keepers than is now being done. To be very plain, we'd like to have the money in your treasury. We can then increase our membership, and an increase of membership is the thing we have always needed."

Now I'll tell you how I feel as a member of the Union. A few of us banded together to battle for the right of bee-keepers, and have paid from one to ten dollars each to support the battle. The Union has done a grand work, and every bee-keeper in the land has had the benefit. If no other benefit, he has had the feeling of security coming from the decisions gained by the Union. There is an element of unfairness in the few bearing all the expense for the benefit of the many, and if there's any way by which a large number could become interested, I for one would be glad to see it.

Notwithstanding the small membership of the Union, of late the income has outrun the outlay, and an unused and perhaps unneeded surplus lies in the treasury. As matters now stand, we shall continue to pay into the treasury one dollar annually, and that seems hardly right when there is no apparent need for it. Why should we pay more into the treasury when we don't know what to do with what we now have? With the decisions of the Union as precedents, there seems less need for further work in the same direction.

There is nothing inconsistent, there would have been nothing inconsistent in the first place, in having the North American do the work that the Union has done. Probably it would have been done in that way but for an emergency that arose requiring immediate action. If one organization can do the work of the two, it is better. Every man who pays his money into the treasury of the Union will just as willingly pay it into the treasury of the North American, if he is sure he will get the same benefit from it.

The main question to be settled is, "What will do the greatest good to the geatest number?" Without claiming any special wisdom in the matter, I may be allowed to say what occurs to me. Merge the Union into the North American. Preserve intact whatever sum may be thought desirable as a defence fund. Use the balance—instead of a grant from government, as in other countries, and in part of our territory—to increase the membership of the North American. It ought not to be a difficult matter to increase it to a thousand, and that thousand would have some force in securing a recognition from the government, and getting on such footing as to easily maintain and increase its numbers. The same reason that now induces 300 men to contribute one dollar annually would still induce them to pay any necessary amount, and additional inducements would bring in others.

How affairs should be administered, and whether the Manager has been properly paid for his services, are separate matters for consideration. C. C. MILLER.

Following Dr. Miller's essay came one by Thos. G. Newman, of Chicago, Ill., upon the

Bee-Keepers' Union and North American.

Everywhere unthinking men abound. They "plod along" in the "old ruts," and often laugh at those who are progressive—those who think and plan, in order to evolve methods for advancement. The unprogressive never push to the front—never startle their companions by advancing a single idea. Conservatism is their boast. They desire no disturbance, while they practice the methods of their ancestors.

The present age needs men of energy and power—men who think, plan, devise and execute their designs. Men whose "deeds of daring" make them an enduring name, and a place, among mankind. Did any industry ever build itself up? Was a dollar ever seen rolling uphill, unless some one was pushing it from behind? Never!

Bee-keeping is no exception. It is just like other industries. It must be studied, helped, guided—yes, *pushed* uphill, just like the dollar. To find a lucrative business the apiarist must employ the most practical methods of production; the product must compare favorably, and compete in quality and price, with others; the apiarist must find the market and then comply with its demands. In other words, must *push* the pursuit all along to complete success.

Not only is this absolutely true in the individual, but also in the organization. For the past 20 years have I labored with others to make the North American Bee-Keepers' Association a representative body, but so far our labors have not been crowned with success. The unproductive "drones" in the National "hive" seem to have been so numerous, that it contains but little "surplus" honey. Each years' receipts having disappeared with wonderful regularity. While the few progressive "workers" have labored zealously all the time, the great majority has been unproductive. Consumption has fully equalled production, and the result is a "weak colony," which some advise to have united to another colony to save it. This is the case in a nut-shell.

Having carefully read all that has lately been written on the proposition to unite it with the National Bee-Keepers' Union, and being equally interested in both (a life-member and ex-President of the former, and General Manager of the latter), it will be conceded that I candidly discuss the question of the proposed amalgamation.

First, let me say that, unintentionally, no doubt, I have

been misrepresented. By repeated and urgent requests, I wrote a short article for publication on the proposed consolidation, pointing out the only feasible method of accomplishing it, incidentally remarking that I did not believe that the members of the Bee-Keepers' Union would consent to have the funds, raised for defense, used for delegates to go to "see the boys and have a good time," as had been hinted by some.

I purposely refrained from expressing an opinion on the question of merging the two societies into one, because of my connection with the latter, which might be construed by some to be selfish, if I opposed it, and, perhaps puerile, if I approved it. Just imagine my surprise when I read the heading which the editor had placed over my communication. It read thus: "A Union of the North American and the Bee-Keepers' Union Will be Opposed by the Manager of the Latter." And yet not a word can be found in the communication upon which to base such a deduction! In fact, I thought favorably at first of the proposition, but was surprised at the lack of suggestions as to how it was to be accomplished, and therefore volunteered to outline the necessary *modus operandi* so far as the Bee-Keepers' Union was concerned. That must have been construed into opposition, for nothing else could possibly be so interpreted. I fancy that many friends of the consolidation expected me here, "with sword and spear," to fight them. In this they will be disappointed, for I am only trying to find a thoroughly practical method of consolidation. If that be found, then count me in its favor—if not, then I am opposed to any bungling work in that direction.

I would now request the author and supporters of the suggestion to show how the two societies can operate advantageously, if consolidated—the work to be accomplished by the united society, and *how* it is to be done. In short, to "show their hand," so that we may know what to expect.

So far, the National Bee-Keepers' Union has been a phenomenal success. It has fought a good fight and come off victorious. Its opponents have been worthy of its steel. It has fought village, city, and State legislation against bee-culture—powers in high and low places, and has wrung from the highest courts of America, decisions in favor of bee-keeping, which will be referred to, as precedents, for generations to come. In fact, it stands to-day without a peer—aye, without an equal, as a "rock of defense" for the pursuit, supporting it against the assaults of ignorance, envy and prejudice, in every State and Province in North America.

Is it too much, then, to demand that our constitutional rights be respected, in giving to each member a full and free vote, on the question of uniting its fortunes with any other society on the globe? Is it not my duty to demand that it shall be shown how the combination can be effected and operated without crippling its efficiency; abridging the rights and privileges of its members to manage its own affairs, and at the same time to maintain its prosperity and perpetuity?

It must be stated that the Bee-Keepers' Union was created to do a distinct work—to defend bee-keepers in the enjoyment of their just and legal rights. This it has done, is now doing, and doubtless will continue to do, to the entire satisfaction of its members, to the honor of the pursuit, and to the admiration of just and honorable men the World over. Anything, therefore, which may cripple its efficiency, or prevent further triumphs, will be universally deplored, and must be obviated.

In advance of any action at this convention, it is but just and right to ascertain the thoughts and feelings of the members of both societies. One prominent member of both organizations wrote to me thus:

"Why unite? There will be antagonism at once. I trust that the Union, which heretofore has done the work, will stay by itself, and on its own lines do the work it was created to do, without regard to the Association, which also has its own special work to do."

Out of the many letters received by the General Manager, from members of the National Bee-Keepers' Union, not one has been favorable to the consolidation, except possibly one from an editor of a bee-periodical. From a very emphatic one, let me quote a portion to show the intense feeling of the writer on the proposed consolidation. He says:

"I notice that there is a general desire for an expression of opinion as to the desirability of uniting the North American Bee-Keepers' Association and the National Bee-Keepers' Union. Well, my vote is—*No!* No!! NO!!! There might be many reasons brought forward against the consolidation, but one only seems strong enough to condemn it. The North American should first make itself a representative body—show that it has a spark of inherent vitality to contribute to the combination."

These letters can, of course, only exhibit individual views and feeling, but they come from members who have paid their money for dues, and must be considered. They have each a "voice" as well as a "vote."

Now, on the other hand: If, as some have suggested, it is concluded to be desirable to reduce the annual dues of the Bee-Keepers' Union, to provide for annual convocations, and thus to gather in its fold all the bee-keepers of America—I can see no objection to that method of consolidation, for the Bee-Keepers' Union has shown itself to be strong and powerful, and able to cope with the opposition. It possesses inherent vitality, has from four to eight times as many members as the North American, and carries a good Bank balance, and has won the right to exist. It is in good working order, and has a glorious future before it.

But here, again, my pride is challenged. Why let the old mother society die? After a quarter of a century's work, it has earned the right to a permanent place among the institutions of Earth. Why not make another desperate effort to form the North American Bee-Keepers' Association into a representative body? True, repeated efforts have not accomplished this in the past. Say not that they were failures—call each one but a delay, and make another effort. If a

Thomas G. Newman, Chicago, Ill.

glorious work is before us, let no one ever use the word "failure."

When Cardinal Richelieu desired to send a mesenger on a difficult mission to recover some important papers, and had instructed him accordingly, the youth hesitatingly exclaimed: "If I should fail!"

"Fail," said the Cardinal, "Fail! In the Lexicon of youth, which Fate reserves for a bright manhood, there is no such word as Fail."

Let us catch up that refrain, and say that for men of noble purposes and iron wills, who have a work to accomplish, "there's no such word as Fail"—and forthwith build on the old foundation a new edifice; around its base let its Representatives cluster, in its beautiful corridors let bee-keepers congregate, and from its dome unfurl the old flag, with the words "North American" in letters of gold, and fling it to the breeze, shouting "Glory to it forever more!"

"In the world's broad field of battle,
In the bivouac of Life,
Be not like dumb, driven cattle!
Be not like dumb, driven cattle!
But be heroes in the strife!

"Trust no Future! howe'er pleasant!
Let the dead Past bury its dead!
Act—act in the living Present!
Heart within, and God o'erhead."

Chicago, Ill., Aug. 26, 1895. THOMAS G. NEWMAN.

Dr. Mason—I am opposed to the amalgamation, and I am not. If it can be done in such a manner as not to impair the usefulness of the Bee-Keepers' Union, I am in favor of the amalgamation. I move that a committee of seven be appointed by

the chair, one of the number to be the President, to confer with the Advisory Board of the National Bee-Keepers' Union, as to the advisability of an amalgamation, and to report at the next annual meeting. Seconded by W. Z. Hutchinson.

Wm. F. Clarke—I must agree with Mr. Newman, that I would not approve of an amalgamation unless the prosperity of the Bee-Keepers' Union can be maintained. The North American has never been what its founders hoped that it would be. It is not representative, and if it cannot be made such I think that it might as well be given a decent funeral. It has always been a local, primary class of bee-keepers. It should be a high court or parliament of bee-keeping. Then this talk of reducing the fees is all wrong. When we get down so that we have to pay only 25 cents a year, I don't want to belong to it.

Mr. Newman—I agree with Mr. Clarke. Nothing will kill the Union or the North American, or the amalgamation, if one be effected, sooner than a tup-penny, ha-penny, farthing fee for membership fee. The Bee-Keepers' Union is respected, not because it has a membership of 300 or 400, but because it has a good bank account, and can employ the best of counsel. It may seem strange, but when only a little honey is coming in—when there is a poor season—there is very little trouble; it is when there is a good harvest, when a farmer sees a good crop of honey being gathered from his fields by a neighbor's bees, that envy and jealousy get the upper hand and complaints are made against the bee-keeper. When the Bee-Keepers' Union is notified of the beginning of a suit, the best attorney is retained, and he and the city attorney, the mayor, the aldermen, etc., are all furnished copies of the decisions that we have secured, and that usually ends the matter.

Dr. Mason—Here in Ontario you get a grant from the Government. In the United States we can't do that. If we should try to get up a county society, and then have this society raise money to send a delegate to the State society it could not be done. I doubt if the North American can ever be made a representative body. Whatever is done, I would not change the character of the Bee-Keepers' Union to any great extent.

Frank Benton—It is useless to attempt to make the North American representative unless it is helped by Congress, and this will never be done. The States might do something in this line, that of aiding State societies, if the thing was rightly managed, but if the two societies are united, and the principal object is that of defense, no assistance may be expected from the States.

Geo. W. York.—I don't think that the committee should wait a whole year before reporting. Let them report as soon as possible, and then let the matter be discussed in the journals. Much valuable time may thus be saved.

W. Z. Hutchinson—We better make haste slowly.

The motion of Dr. Mason was finally revised to read as follows:

That a committee of seven be appointed to take into consideration the proposed amalgamation of the National Bee-Keepers' Union and the North American Bee-Keepers' Association, and to arrange terms therefor, with full power to perfect the same so far as this Association is concerned; and to report through the bee-journals as soon as possible. The present President of this Association to be one of the members of that Committee.

In this shape the motion was carried, and later the President announced the following committee: Thos. G. Newman, Chicago, Ills.; F. A. Gemmill, Stratford, Ont.; J. T. Calvert, Medina, Ohio; M. B. Holmes, Athens, Ont.; A. B. Mason, Toledo, Ohio; Eugene Secor, Forest City, Iowa, and R. F. Holtermann, Brantford, Ont.

Mr. G. M. Doolittle, of Borodino, N. Y., then gave a talk on "Some Things of Interest to Bee-Keepers." [A condensed report of Mr. Doolittle's address will be found on page 652.—EDITOR.]

The convention then adjourned until evening.

(Continued on page 661.)

Honey as Food and Medicine.—A new and revised edition of this 32-page pamphlet is now issued. It has 5 blank pages on which to write or paste recipes taken from other sources. It is just what its name indicates, and should be liberally distributed among the people everywhere to create a demand for honey. It contains a number of recipes on the use of honey as food and as medicine, besides much other interesting and valuable information. Prices, postpaid, are: Single copy, 5 cts.; 10 copies 35 cts.; 50 for $1.25; 100 for $2.00. Better give them a trial. Send all orders to the Bee Journal office.

☞ See "Bee-Keeper's Guide" offer on page 655.

Contributed Articles.

On Important Apiarian Subjects.

Contraction of the Brood-Nest to Secure Comb Honey.

BY HON. EUGENE SECOR.

It used to be a favorite theory of mine that we could hive prime swarms in a small brood-chamber, and compel the bees to store nearly everything they gathered in surplus receptacles.

A hive just suited to this end I naturally thought would be the style of the New Heddon horizontally-divisible brood-chamber, because it afforded a larger surface over the cluster than a Langstroth hive divided or contracted vertically by dummies or division-boards.

The theory was to hive all large prime swarms (or those intended for the production of comb honey) issuing at the beginning of, or during the honey-flow, into one section of this shallow hive, and force them into the sections at once. By the use of a queen-excluder the queen is held below. If the swarm is large it will immediately fill one or more supers with bees, and if the half hive is filled with empty frames, or, at the most, only starters, the bees will immediately begin work in the super if nectar secretion is abundant.

After practicing this method for a number of years, I find some objections to it which had not occurred to me before trying it.

First, the tendency to "swarm out" the first, second or third day.

Second, the increased tendency to swarm after a week or ten days—the confined quarters causing them to build queen-cells.

Third, the great amount of pollen stored in the sections over these shallow hives.

We can overcome the first objection by using one or more "empties" under the one holding the queen, leaving them there only long enough to get the bees settled down to business. But the second objection I have not found so easily answered. If anyone knows how to prevent swarming under such conditions without caging the queen, or without entailing too much labor, I should be grateful for the suggestion.

It is the third objection, however, which is the most serious one with me. Comb honey, more or less encumbered with cells of pollen, is a serious matter to the producer who strives to put on the market only a first-class product.

If it were not for this serious drawback, I should use the half-depth brood-chambers more than I do. They have many advantages over a deep frame, but for the purpose of contraction when working for comb honey they are disappointing—at least to me. Perhaps some one will turn on the light of his experience and help me out of this pollen-polluted difficulty also.

Forest City, Iowa.

Bee-Keeping in Switzerland.

BY A. S. ROSENROLL.

If the degree of civilization of a nation could be measured by its attention to bee-keeping, then Switzerland certainly would take a foremost position in the ranks of civilized nations. The destiny and welfare of the bee-keeping industry are directed and watched over by not less than four bee-papers, (the property of the various bee-keepers' associations) of which two are published in the German, and one each in the French and Italian languages. Besides, most of the local newspapers, especially those treating on agricultural matters, give numerous articles and hints on bee-keeping.

The country is well stocked with bees, and according to a former census there were in Switzerland 180,000 colonies of bees, or one colony to every 15 inhabitants.

The bee-keeper's associations here are not only trade unions, or protective associations, but rather patriotic benevolent societies, whose object is to encourage bee-keeping among the country people in order to raise the national prosperity and create a pleasant and ennobling pastime and home industry for the professional man, the artisan and laborer, and their families, in their leisure hours. Many of the country schools are supplied with bee-houses and hives, for the use of the teachers, and where the scholars are also given practical instructions in the art of handling and managing bees.

Some of the railway companies are also assisting their employes, station officers and linemen to keep bees at suitable

points along their lines, in order to increase their home comforts, and are supplying hives, building sheds, and paying premiums to them.

Migratory bee-keeping receives considerable attention in many parts of the country, the bees being moved in the summer after the hay-season, from the lower plains to the Alpine heights, where myriads of Alpine roses and other flowers offer them a rich and delicious pasture.

Like most other countries, Switzerland has in times past had its craze for Italianizing, and not wisely but extensively supplanted the native black bee by the Italian, so that in many parts of the country the bees are gradually getting mongrelized, and are becoming vicious and savage brutes. But bee-keepers are beginning to find out the error they have made, and are often, at considerable expense, returning to the indigenous bees, or Carniolan, a variety of the black bee.

It is generally admitted here by all experienced and disinterested bee-keepers, that the pure Germans or Carniolans are the gentlest, the hardiest, and most industrious bees known. Their habitation—the north of Europe, with its long and severe winters, its cold winds and stormy season—would naturally, in the course of ages, evolve a hardy and industrious race, fit to survive such conditions. That they are better geometricians and build nicer, straighter and more regular combs—in fact almost faultless—is beyond dispute. Sometimes we hear from a bee-keeper that his black bees are vicious, but if he were to examine them closely he would find that they are not pure black, but have become mongrelized somehow.

DEALING WITH LAYING WORKERS.

The other day someone, through the American Bee Journal, asked for information how to get rid of laying workers. We have them here, sometimes, especially in Italianized apiaries, but have no difficulty in dealing with them. We remove the affected hive from its old stand, about 100 feet away, under the shade of a tree, if possible; in the meantime placing a similar hive with a little brood and a queen, or queen-cell, in its place. We then take from the affected hive in slow succession one frame after another, and brush and shake the bees gently into the air, setting the frames into the hive on the old stand, or putting them away. The worker-bees will thus find their way back into the hive on the old stand, and re-establish themselves with the new queen or queen-cell, while the layers, which had never left the hive before, and would also be too heavy to fly, will fall to the ground and get lost.

If this is done on a fine day when the bees are flying, and care is taken to prevent them forming into a clump, it will never fail, and is simple.

Ollon, Switzerland, Aug. 20, 1895.

What Dr. Miller Thinks.

GIVING SECTIONS IN THE FALL.—I've thought it a good plan to allow no sections on after the white honey harvest was over, but the plan B. Taylor gives on page 614 sets one to thinking whether there may not be a gain by it, providing a fall flow is pretty sure. But where four times out of five the fall yield is a crop of propolis, I believe I'd rather leave the sections off.

TIME TO PUT ON SECTIONS.—In his Toronto essay (page 614), Mr. Taylor says he puts sections on strong colonies 10 days before clover blooms. I wish he would tell us whether he means 10 days before the first white clover blossoms are seen, and if so, why he wants sections on so soon. In my location I have noticed for years that the first few clover blossoms are seen about 10 days before the bees seem to do much on clover. I like to have sections on *before* the bees get into their heads the first notion of swarming, but if I get them on immediately *after* I see the first clover bloom, I feel pretty safe. But I want to say to you Bro. Taylor, that in spite of the fact that I'm not strongly in favor of essays at conventions, that Toronto essay of yours was a mighty good and practical one.

TAXING BEES.—On page 617, Rev. E. T. Abbott gives one excellent reason why bees should be taxed. Practice in this respect varies very much, bees being specially exempted from taxation, I think, in Iowa and perhaps elsewhere, while in the State of Illinois they are taxed in some places and not in others. I never could see any good reason why all colonies of bees should not be taxed. If I have $100 invested in cattle, on which I am taxed, and trade those cattle for bees, I don't see why I should not continue to pay taxes to the same amount, for I think I have just as much need of protection to my property after the trade as before.

LONGEVITY IN BEES.—Geo. J. VandeVord, on page 618, is right in attaching much importance to the matter of having workers that have a long lease of life, no matter whether the queens are prolific or not. If a week can be added to the life of a worker-bee, that means more than a fourth added to the amount of nectar it will gather, for the average worker spends only about 26 days in the field, and a week would be more than the fourth of 26 days.

SAMUEL WAGNER.—I always supposed, until I read page 620, that the first editor of the American Bee Journal was a native-born German. His familiarity with all that pertained to bee-culture in Germany was of great value, certainly. Take the first volume of the Journal, and cut out everything that has a German tinge about it, and you will leave a rather thin volume.

QUEENS IN UPPER STORIES.—Chester Belding says on page 625 that he has given cells in protectors in upper stories, knew they hatched out all right, but they were gone in a short time. My experience exactly; but then I always tried it somewhat early, and Doolittle says it should not be done till after the honey harvest. Perhaps Mr. Belding and others made the same mistake I did. Marengo, Ill.

The Results of 1895 "Footed Up."

BY EDWIN BEVINS.

The honey-flow now is about over here (Aug. 31) and the results of work in the apiary for 1895 can be footed up. My surplus will average something over 50 pounds per colony, spring count, and this "count" includes one colony that was found queenless at the commencement of the honey-flow, and another which, after swarming once, developed a laying worker and had to be broken up. Besides this, I have just doubled my number of colonies, after having three go to the woods, and doubling up two others. Every colony in the yard is now strong in numbers, with the brood-chambers full of the best of winter stores.

BEES BY THE POUND.—About the middle of May I received from Texas, two 2-pound lots of bees with tested queens—one 3-banded, the other 5-banded. They were placed in 8-frame dove-tailed hives, and the hives filled with frames of foundation as needed. These lots have been treated exactly alike. Sections have been put on and taken off at the same time. The cost of the two lots was the same. The yellow bees have completed 82 sections of honey—the 3-banded have completed 84. So it seems that I have paid the price of two sections of honey for yellowness. In readiness to sting, I see but little difference between the two lots. They are not at all difficult to handle, but I have some milder-mannered bees in the apiary. Mr. McArthur will agree that this kind of migratory bee-keeping has not been unprofitable to me, when he learns that the cost of each lot was exactly $3.67½ each, and that the sections of honey bring 15 cents each.

LARGE AND SMALL HIVES.—At considerable trouble and some expense I fitted up two of the Dadant extracting-hives with sections for comb honey. The bees in both hives were blacks, and I did not expect them to swarm. One of the colonies, however, swarmed twice. I had a colony of blacks in an 8-frame dove-tailed hive standing near, which I intended to work for comparison of results with one of the colonies in one of the big hives. This colony also swarmed twice. Supers were put on at the same time, and have not been disturbed except that an examination has been made now and then to see what progress has been made in them. The one on the big hive seems to be the nearest filled. The other colony in the big hive did not swarm and has stored about 80 pounds of honey. The product of the other colonies in big hives that did not swarm will be about 100 pounds each of extracted honey. It will be seen that the two 2-pound lots of Italian bees have produced about the same amount of honey as the colony of blacks in the big hive that did not swarm. I had no colonies of blacks in small hives that did not swarm, and so there is no chance for fair comparison.

One colony of Italians in a standard hive, having a clipped queen, did not swarm, but two or three frames of brood were taken from it to strengthen other colonies. The work of this

colony has been the completion of about 100 sections of honey. If I were to stop here the judgment of apiarists, from what I have written, would most likely not be favorable to the use of big hives for comb honey. But there is another side to the picture. One in five of my colonies in the big hives have swarmed. All of my colonies in 8-frame hives have swarmed, with the exceptions noted, viz.: one queenless, one with a clipped queen, and the two lots from Texas.

Now if the other colonies in the 8-frame hives had all been in the large hives, with combs all built, and only one in five had swarmed, I should have had more surplus honey than I have now. Apiarists can get some big yields from *some* of their colonies in small hives, but then they are quite liable to have a good many colonies from which they get no yield at all.

Next season I shall make and use some hives 12 inches deep, and of a length and width to take the supers of the 10-frame dovetailed hive. This hive will have about the same capacity as the Dadant extracting-hives, and will be used for comb honey till I am satisfied that there is a positive disadvantage in using them. They will not be moved about much. I would like to avoid the many manipulations that seem to be necessary for the successful production of comb honey in the standard hive.

THE BEE-ESCAPE.—It is often said, and doubtless with truth, that the smoker is the most indispensable thing in the apiary, but I have gotten a dreat deal of comfort this season out of the Porter bee-escape. There was one case of seeming failure, however. I put the escape on under a large extracting-case, one morning, and towards night an examination showed that but few bees had passed out. The next morning it was the same way, and I left the escape on till the following morning. Then I found a good many bees on the combs, and was a good deal vexed, but concluded that I would smoke them out. After smoking and brushing awhile, I noticed that a good many bees were lying around not so large as they ought to be, and they did not seem to know much. A further examination showed that the three middle frames were about half full of brood, and then my vexation towards the escape vanished like morning dew.

Since writing the foregoing paragraph I have had another case of seeming failure of the escape to do its duty. It was put on one morning under a case of sections, and at evening the bees seemed to be all in the super that were there in the morning. It was left till the next morning, and then on raising the cover I found the bees all there. Very reluctantly I resolved to smoke them out, as they were the gentlest bees and the best workers in the yard. When the escape was removed, a good many bees stuck to the boards, and they were laid to one side with it while I smoked the others.

No further attention was paid to them till some time in the afternoon, when I wanted the escape to put on another hive. On picking it up, there was seen a small cluster of bees under a shady corner of the board. A few of these bees clung to the board, and among them was the queen. Then my faith in the escape returned. I carried the queen to the entrance of the hive, and saw her run in, with a good deal of satisfaction.

THREE-BANDED BEES.—I hope a certain Texas queen-breeder will not be offended if I here record the preformance of one of the 3-banded Italian queens which I got in the spring of 1894. The colony of which she was the head sent out a swarm May 6. Another swarm issued from the same hive 12 days later. Then the first swarm has swarmed twice, and the second one once this summer. The original colony got so strong a few days ago that a 2-frame nucleus was taken from it to keep it from swarming again. This makes six colonies and one nucleus due to this queen this season. Her bees are the gentlest I ever handled. No accurate record of the honey taken from these six colonies has been kept, but it is not less than one full case of sections from each colony. All of them have cases on at this date (Aug. 27), and it is safe to say that they are half filled.

Another colony, with one of the same breeder's queens, swarmed early, and the swarm swarmed July 15. Since then this last swarm has filled a big 10-frame extracting hive full of honey and brood, and is itself threatening to swarm.

MANIPULATIONS.—In conclusion, I will remark that heretofore I have read apiarian literature partly with a view to learn what manipulations successful bee-keepers go through with in the management of their bees. Hereafter it will be my study to avoid as many manipulations as possible, and at the same time secure good results in surplus honey.

Leon, Iowa.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Instinct.—"The bees are gathering honey and pollen for the sustenance of generations yet unborn, thus furnishing a striking illustration of that foresight which, for want of a better name and to conceal our ignorance, we call instinct."—Mr. Weed, in "Ten New England Blossoms."

Very true, that word instinct has been used all along down the ages to explain all the actions of animals, which man in his egotism has refused to call intelligence. A noted French writer says:

"For ourselves, we have never well understood what people mean by instinct; and we frankly grant to the bees intelligence, as we do also to many animals. The great number of the acts of their life seem to be the result of an idea, a mental deliberation, a determination come to after examination and reflection."

Locating their home is one of these acts on the part of the bees. While lecturing at the State University, the Professor of Biology asked me how I accounted for some of the acts of the bees. I replied that they *know* things the same as men and women. I was pleased to note his reply, as it was in harmony with my own views. He remarked: "There can be no question about that; it is very convenient to call it instinct, but it is knowledge just the same."

Romanes says: "Instinct is the conscious performance of actions that are adaptive in character, but pursued without necessary knowledge of the relation between the means employed and the ends attained." According to this definition of instinct, the bees surely have something more, for who will deny that they do not have the "necessary knowledge of the relation between the means employed and the end attained," when they take a worker-larva and give it the proper food, or quantity of food, to produce a queen? If they do not do some reasoning—thinking, if you please—about the matter, how do they know when to give the food and when to withhold it? This is only one of a great many acts on the part of the bees which cannot be accounted for except on the ground of intelligence. Romanes well says: "We must, however, remember that instinctive actions are very commonly tempered with what Huber calls 'a little dose of judgment, or reason.'" Notwithstanding this admission, he, like many others, labors hard to show that there is a wide chasm between reason and instinct, but to me it seems to be a "distinction without a difference." I much prefer to fall in with the idea of the Frenchman quoted above, and "frankly grant to the bee intelligence." I know this idea is not so flattering to man's egotism, but it is more in harmony with the facts, and the advanced ideas of the 19th century.

Carrying Eggs.—The British bee-keepers have been discussing this subject, and in the British Bee Journal of Aug. 29th, Mr. Peter Scattergood, who seems to be a careful observer, gives some facts which are worth repeating.

To a colony, which has been queenless for some days, he introduced a queen by caging her on one of the combs. There were no signs of eggs or unsealed brood in the hive. She was left caged five days. Some 200 cells were filled with brood while the queen was caged, and the inference is that the queen dropped the eggs while in the cage, and the bees gathered them up. Both drones and workers were reared from this brood. The bees were much lighter than any others in Mr. S.'s apiary, as his other bees were all black, so that he is quite sure that the eggs could not have been laid by any other queen than the one caged. He says:

"The fact of workers and drones of a distinctly *lighter* color to any of my bees resulting from the eggs deposited in the cells, furnishes a complete corroboration of the theory that the eggs were laid by the queen while caged, and were carried by the bees into the cells in which the workers and drones mentioned have been reared."

If this be true—the evidence as given seems very convincing—it does away with the theory that the shape of the cell has anything to do with the kind of eggs which the queen lays. It also establishes the fact that the workers know when an egg has been fertilized; for, if they did not, how would they know to put the drone-eggs into the proper cells? This all seems very strange at first thought, but it is not so strange after all, for it has its analogy in other families of social in-

sects. Almost every one has seen ants carrying their eggs from one place to another. The family of insects, called termites—or sometimes white ants, but in no way related to the ants—carry away the eggs as fast as the queen, or mother termite, lays them. When the queen is filled with eggs, she is unable to move. Comstock says she looks more like a potato than anything else at this time. Her sole business, like that of the mother-bee, is to lay eggs, and as fast as she lays them they are carried into other departments and cared for by the workers, as are also the young when they are hatched out.

Wilson says that occasionally a new nest, or tarmitarium, as it is technically called, may be found, in which king and queen are absent, and which contains workers only. "These, however," he says, "gradually prepare the nest for full completion by bringing eggs from other cells from a neighboring termitarium, for which the due population of the colony will be in time produced."

The reader will notice that in this case the workers not only move the eggs about in their own nest, but go to neighboring nests and secure the necessary eggs to produce a queen if for any cause they are compelled to do so. With these facts before us, it should not seem strange that bees carry eggs from one cell to another. So far as I am personally concerned, I am prepared to accept as an established fact that bees do move eggs, and I should not be greatly surprised to learn that in rare instances they even carry them from other hives. If termites carry eggs in this way, why not bees?

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

The International Bee-Keepers' Congress.

This gathering meets at Atlanta, Ga., Dec. 4th and 5th. The Exposition at that time will be at its best, and the railroad rates the lowest. It will be a large convention of bee-keepers. Make your arrangements to go.

Sumac Honey.

DR. BROWN:—On page 574, you say: "Sumac is a good honey-plant, but the honey is very dark." I wish to say that my observation is quite different from yours. At my home apiary, a good portion of the honey is from white sumac, which begins to bloom about the first of June, and continues 15 to 20 days. While it is blooming there is little else from which the bees gather honey, so that I have a good opportunity to observe. The honey that I get at that time is a light golden color. C. C. PARSONS.

Bessemer, Ala.

ANSWER.—It is a fact, with the "why and wherefore" not well understood, that the shade of honey of the same variety of plant frequently varies in different sections of the country, and also with the season. For instance: Mr. Parsons, of Bessemer, Ala., says that sumac honey with him is of a golden yellow, while the honey gathered from sumac in this portion of Georgia is quite dark; though he says his is gathered from the white sumac. The variety with me is *Rhus glabrum*. Now there are four or five varieties of Rhus. I don't know what he calls the white variety, but I presume it is the same variety we have here.

The Texas State Convention.

The Texas State Bee-Keepers' Association held its 18th convention on Aug. 21, 1895, being its first semi-annual meeting. The members were pained to learn on meeting that the President, Dr. W. K. Marshall, could not be present on account of illness.

It was held at the Graham hive-factory, in Greenville. It was opened by the Vice-President, who gave an address of welcome, and told in his good-humored way that he always loved to meet the bee-keepers of his country, and when he was only a boy how glad he was to hear the old dinner-horn blow, for that was the way they settled the swarms of bees in those days.

The members present were as as follows: Vice-Pres. W. R. Graham, J. L. Strickland, D. T. Willis, Clay Dodson, B. F. Yancy, A. B. Spradling, W. D. Spradling, G. B. Pierce, James Yancy, W. W. Strickland, W. T. Boyd, Melvin Kimbro, R. D. Waddle, R. E. Spradling, W. H. White, H. L. Bolton, Alva White, David Yancy, Jr., W. N. Pedigo, G. E. West, R. E. L. Peck, and E. F. H. Mattox.

There were 650 colonies of bees represented. There had been but little honey taken up to date—3,375 pounds being reported.

QUESTION-BOX.

How can we market our honey to the best advantage? The prevailing idea was to get it in as attractive shape as possible, in small packages, and to give honey in samples.

What size sections are best? Some preferred 4¼x1⅛, while some the smaller ones.

Which is the most profitable to produce, comb honey at 12½ cents per pound, or extracted at 10 cents per pound? Extracted, much more so, as it was thought that almost twice as much extracted honey could be secured as comb.

What advantage is the queen-excluding honey-board to the honey-producer? Only to keep the queen below.

Is there any advantage in extracting from the brood-nest to give the queen room? It was decided there was some.

How many colonies should a person have to justify him in buying an extractor? 6 to 10.

Will extracting from the brood-nest stop the work in the sections? Yes.

Are there two kinds of moth-worms? We have only one kind of moth-worm. We also have a wax-worm.

Is it profitable to plant sweet clover for pasturage? It was thought profitable to plant all vacant spots and waste-places. All were urged to try the experiment.

The organization of county bee-keepers' associations was discussed, and thought to be of great value to bee-keepers.

How can I Italianize my apiary the quickest and cheapest way? Plans were given by several members, and were very interesting.

Increase of colonies and how, was explained by W. R. Graham.

The awards for exhibits were as follows:

For best sample of comb honey, R E. L. Peck received a honey-knife.

For best sample of extracted honey, H. L. Bolton received a honey-knife.

For best bees, W. H. White received a book, "Langstroth on the Honey-Bee."

R. E. L. Peck reported foul brood in his apiary.

The convention adjourned to meet on the first Wednesday and Thursday in April, 1896. W. H. WHITE, SEC.

Deport, Tex.

Tiering up Supers.

DR. BROWN:—My bees have gathered but little honey during this year until recently. Now, however, they are quite busy, so much so, that I have been obliged to put on second supers, which also are being filled quite rapidly.

1. This Piedmont section corresponds largely with that of Georgia. Will you please tell me what plants the bees are working so vigorously?

2. Is it likely, under ordinary conditions, that a moderate honey-flow will continue from fall flowers until frost?

3. I have one very strong colony of yellow Italian bees, which seem to be at work night and day. This hive, at present, consists of 10 brood-frames, and two supers have been placed above. Now it is evident they are still crowded. Suppose I had placed three or four supers on the hive, at the beginning, instead of one, would that have induced more bees to be employed at the same time? also, would the work finally done in each super, have been as well done; i. e., as many sections well capped, as in the old method of tiering up?

Sourwood blossoms were abundant during the past summer, but my observations of them corresponds with your statement of your part of Georgia—very little honey is gathered from them by the bees. W. LEGETTE.

Forest City, N. C., Sept 10.

ANSWERS.—1. I presume they must be working on the golden-rod and aster.

2. The aster blooms till killed by frost, and is one of *the best* fall honey-plants we have.

3. I do not think it a good plan to put on too many empty supers at once. When one is partly filled raise it up, and place one empty one beneath. When too many are put on at once, the bees are more reluctant to commence work in them—they seem to look upon the job before them as too big to tackle.

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George W. York, - - Editor.

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Editorial Budget.

Father Langstroth Passes Away.—Just as the Bee Journal goes to press (Monday forenoon), I learn through a Chicago daily paper that Father Langstroth died of apoplexy yesterday (Oct. 6) while preaching to a large audience at his home in Dayton, Ohio. Bee-keepers in all lands will receive the sad news with deep regret, and extend heartfelt sympathy to the bereaved relatives. Next week I will likely be able to give a more extended notice.

Mr. Harry Lathrop, of Browntown, Wis., made the Bee Journal office a very pleasant call last Friday. Mr. L. is one of the foremost bee-men of that great honey-producing State just north of Illinois.

Mildred Susan Calvert is her name. She is the newest and sweetest "little queen" now at the "Home of the Honey-Bees." But she's not for sale. "Mildred" was born Sept. 29, 1895. Long may she live, and prove to be a great blessing to Brother and Sister Calvert, and to the whole world. Heartiest congratulations to her parents and all the Rootvillians—including "Grandpa" and "Grandma" Root!

Mr. G. M. Doolittle's Address at the Toronto convention was entirely extempore—at least he had no manuscript, so the Secretary did not get it—but a kind friend who was able to recall the gist of the speech, has sent it to me, which I give here:

SOMETHING OF INTEREST TO BEE-KEEPERS.

After a recess had been taken, during which many went away, or scattered about the school grounds, Mr. Doolittle gave an off-hand address.

He said, in brief, that much had been said about the best hives, the best way of securing a large crop of honey, how best to winter bees, etc., so he thought best to speak of a few things not usually spoken of, or written about. He thought that bee-keepers did not fully keep the command of loving others as ourselves; took the ground that all mankind was our brother, which ground Thos. Jefferson, the Apostle Paul, and Jesus Christ stood firmly upon. Bee-keepers were wont to hold back their best thoughts and things from others, unless they could have a financial compensation for them, while the Good Book said, "Freely ye have received, freely give," and "In honor preferring one another." He told how bee-keepers would go back on each other for some trivial offence, and would not have anything to do with each other ever afterward, and gave the illustration of Henry Clay and the musket, which story is as familiar as a nursery rhyme to many, to illustrate the great truth which the Master gave, that we should forgive "till seventy times seven."

Mr. Doolittle next spoke about the habit bee-keepers sometimes got into of "kicking" and growling about each other, the low price of honey, etc., till the whole air was "blue;" gave illustrations of how the price of honey compared favorably with that of wheat, barley, wool, etc., produced by the agriculturist; and told the story about the two drunken men who got into the same bed and began kicking each other till one was kicked out, to illustrate that this kicking habit was sure to land some one outside the fraternal feelings which was said to predominate among apiarists.

He next touched upon the subject of each bee-keeper wanting credit for everything along apicultural lines, which such an one had brought to public notice, that they might appear great, or get much honor to themselves, while the Master said, "He that would be great among you, let him be your servant;" and gave the story of the sinking ship, and the old mate, who preferred to stay on the ship and die, to taking his rightful "lot," (that the Captain might go on the life-boat, and bring up his boys in the fear of God, that they might bless the world) as an illustration of true honor and greatness in the sight of Heaven. This story was told so touchingly that many eyes grew moist, and many apparently resolved on less unselfish lives.

Then the "adulteration of honey" matter was touched upon, Mr. Doolittle taking the ground that we had said too much on this matter and acted too little. He said we should first strive for effective laws making the adulteration of honey a crime in the sight of the law, and then bring the offender of that law to a just punishment for his crime; after which the papers should simply note the fact that Mr. So-and-So had been caught criminally adulterating honey, and was paying the penalty for the same. This he argued would put a wholesome restraint upon all would-be sinners, without casting a stigma upon our product, which our course of the past has done, leading many to think that most of the honey on the market was adulterated. This was also illustrated by an appropriate anecdote which kept the audience in the best of humor, even if some did not agree with all the speaker said.

In closing, he took the ground that each should weigh every question which came before them, subjecting it to the light which shone from the Divine Page, and thus decide as to its being right or wrong, and having decided that it was wrong, no one had any business with it, and if right it should be stood by, though such standing caused the person to stand all alone, for it was far better to stand alone in the right than to go wrong with a multitude.

Mr. Doolittle's address was a masterly production, and it is to be regretted that so many members of the convention were away, or straggled in while he was speaking, thus losing a part or all of the address. A FRIEND.

Mr. Chas. Dadant—the best known Frenchman bee-keeper in this country—I had a very pleasant visit with on Monday, Sept. 30, at the Union Depot here in Chicago, while he was waiting a short time for a train on another road to take him to his home in Hamilton, Ill. He had been for some seven weeks at Sturgeon Bay, Wis., to escape the affliction of a hay-fever siege.

Although Bro. Dadant is 78 years of age, he seems still hale and hearty. We had (to me) a very pleasant chat—about apicultural things and people. Bee Journal readers will soon enjoy reading some articles from his pen, upon the best size of hives. Mr. D.'s experience covers a period of over 30 years in France and America. He has experimented with nearly every kind of hive and frame brought forward in that time, and settled long ago upon his present hive as the best. He will answer many interesting questions about hives, and will accompany some of his articles with illustrations. We all will be eager to read what he has to say.

Rev. W. F. Clarke, of Canada, spent about a week, the latter part of September, visiting relatives and friends in Chicago. He returned a week ago last Monday.

Mr. A. J. Mercer, of Kansas, made quite a display of apiarian things at the Crowley, Kans., Fair recently. The local newspaper, in part, said this concerning it:

A. J. Mercer had a display of bees, bee-hives, and honey-boxes, with the machinery and material for manufacturing;

also comb foundation. Mr. M. was present with his display and gave all the necessary information concerning the construction of hives, the habits of bees, the method of handling them, etc. This is probably the first time that bees in all their workings have been shown in Cowley county during an agricultural Fair.

What better way is there to advertise honey and the bee-business than the above? Such displays are great educators, and will aid much in dispelling the prevalent misconceptions concerning the bee and its management. Bee-keepers should embrace every opportunity possible to place the bee-keeping industry before the public in its true light.

The Toronto Convention Report.—The last installment of this Report came to the Bee Journal office, from Secretary Hutchinson, to-day, Oct. 2—within less than a month after the meeting closed! And this while Bro. H. has not been at all well. It has been a real pleasure to me, to receive the Report so promptly, after the unfortunate experience of a year ago.

By the way, that undelivered balance of the St. Joseph Report must still be quietly snoozing somewhere down in Washington, D. C. At this writing, it has not been received at this office.

Mr. Byron Walker, of Evart, Mich., called last week. He reports a crop of 30,000 pounds of willowherb honey alone, this year. Mr. Walker usually spends several months each fall and winter in Chicago selling honey.

Among the Bee-Papers

Gleaned by Dr. Miller.

SOME STRAY STRAWS FROM GLEANINGS.

Crimson clover is also called scarlet clover, German clover, German mammoth clover, and Italian clover. Its botanical name is *Trifolium incarnatum.*

Punic bees are no longer mentioned. Yet wherever any of that jet-black blood is left in my apiary I find good workers. But they're cross, and not fit to make comb honey. They make watery combs, and, oh the bee-glue!

Honey-vinegar is perhaps not made as much as it should be. A writer in British Bee Journal says: "By using an extra quantity of honey one gets a splendid acid beverage that will compare favorably with raspberry vinegar."

In England, where crimson clover is grown with some difficulty, it is said to winter-kill if sown on newly-plowed land, but to pass the winter uninjured if merely harrowed in on stubble."—Bulletin 125, Michigan Experiment Station. That is, sow on hard rather than mellow ground.

Rape is a great honey-plant in Germany and elsewhere, but is little known in this country. The Stockman thinks it is destined to become much better known here; and Prof. Thos. Shaw is "certain that it is to be a great factor in solving the problem of cheap-mutton production." "Am pasturing six sheep and ten lambs in fine form on an acre of land."

THE WEIGHT OF BEES LOADED AND EMPTY.

Prof. B. F. Koons, President of the Connecticut Agricultural College, has given some very interesting figures in Gleanings. Two years ago he found 4,141 to 5,669 workers in a pound, using scales so delicately adjusted as to show one-millionth part of a pound. This year he investigated the load of a bee and says:

"The following is the result of weighing several hundred each, of the returning and outgoing bees. The smallest number of bees necessary to carry one pound of honey, as shown by my results, is 10,154; or, in other words, one bee can carry one ten thousand one hundred and fifty-fourth part of a pound of honey; and the largest number, as shown by the results, required to carry a pound is 45,641; and the average of all the sets weighed is 20,167. Perhaps, then, it is approximately correct to say that the average load of a bee is one twenty-thousandth of a pound; or in other words, if a colony has 20,000 bees in it, and each makes one trip a day, they will add one pound to their stores. Of course, not all the bees in a colony leave the hive, the nurses remaining at home, hence necessitating more trips of those which do 'go a-field.'

"I also repeated my observations of two years ago on the weight of bees, and found that my numbers ran from 3,680 to 5,495 in a pound, and the average about 4,800, the same as in my former test. I likewise secured the following on the weight of drones: Of a dozen or more weighed, the largest would require 1,808 to make a pound, and the smallest 2,122 or an average of about 2,000 drones in a pound, over against nearly 5,000 workers."

SOME LITERATURE AT TORONTO.

The practice of circulating special circulars and dodgers, as was done at the last meeting of the North American Bee-Keepers' Association during its sessions, was not very creditable to the writers of such matter, or considerate to those in attendance, especially the person who happened to have the floor at the time. If the pet notions and supposed grievances of the writers of these circulars cannot be brought to the attention of bee-keepers in any other way, it were better that they remain in oblivion. Such practices were condemned at the time, and always should be. We refer to the distribution of the pamphlet entitled "Bees," attacking Geo. W. York and others, by Frank Benton, and a dodger advertising a booklet by W. F. Clarke, defending sugar-honey production, and attacking Ontario's foul-brood inspector, Wm. McEvoy.—Editorial in Gleanings.

DOOLITTLE AT TORONTO.

An editorial in Gleanings says:

"G. M. Doolittle's genial face, and eloquent words on some things of interest to bee-keepers were a treat indeed. The address deserved a larger hearing. His first plea was for more brotherly love, less desire for honor and self-aggrandizement, more willingness to impart, for the common good, valuable ideas gained in our own experience. 'Freely ye have received, freely give.' Along the line of honey-adulteration he believes that more work (detective work, if need be) and less talk would accomplish a great deal more. At present, though a great deal has been said, practically nothing has been accomplished to stop adulteration. Here is work that the Union ought to take up. If a few samples were made in convicting and punishing adulterators, they would be more careful."

Canadian Beedom.

Mr. McArthur's Bees and Bee-Forage.

The Toronto Convention had no lack of side-shows and extra attractions. There was the city itself, with its lovely private homes, beautiful parks, business palaces, and magnificent public buildings. The Industrial Fair was going on, which Toronto people, with pardonable pride, are fond of calling "the biggest show on earth." But to bee-keepers, the most attractive side-show was that of Mr. John McArthur, who cordially invited all and sundry to visit his isolated bee-yard, located on the island. About 40 of us accepted the invitation, and enjoyed a rare treat. Toronto Island is a tract of land formed of sand washed up by the rivers—Niagara, Humber and Don—situated in Lake Ontario, directly opposite the city, and forming a spacious harbor. The island is about two miles from the main land, comprising 5,000 acres, and some two miles, or a little less, in width. Ten years ago it was a barren desert. Now part of it is laid out in a large park. Thousands of nectar-yielding trees have been planted, white clover grows luxuriantly, and there is a greatly varied flora. The city owns the island, and a permit is needed to put anything on it, even bees. Mr. McArthur has obtained a concession of a large portion of it, on the condition of his seeding it down with plants fitted to keep the sand from shifting and drifting with the wind. He has already sown well-nigh all the honey-producing plants that will flourish in this climate, and what was formerly a wilderness and a solitary place, now "blossoms as the rose." Its isolation from wild and other bees is complete, and it is the very ideal of a spot for breeding queen-bees "to a feather."

To this lovely seclusion we made our way on one of the

ferry-boats. Mr. McArthur claims to have laid the foundation here of a race of non-stinging bees. Not but that they have stings that are fully developed. His claim is that they are bred of such gentle parentage they have lost the disposition to sting. The exhibition made by him certainly goes far to establish his claim. On our arrival at the apiary the first thing he did was to kick over a hive filled with bees. We naturally turned tail and fled to a respectful distance, expecting that the bees would swarm out in angry thousands. But beyond the appearance of a few guards to see what was the matter, there was no demonstration whatever. Mr. McArthur set the hive right side up, and immediately kicked it over again from the other direction. Still there was no sign of resentment. Putting the hive in place again, he at once proceeded, without use of veil or gloves, to open the hive and take out the frames. The bees were quieter than flies. They seemed unconscious that anything out of the way had happened. We all drew near and examined them at our leisure. The queen was easily found, and a beautiful one she was. Talk of five-banded queens! This queen was yellow all over, from head to tip. The shade of yellow was light, a kind of straw color, not bright golden. She somewhat resembled the lighter class of leather-colored Italians. The workers were of similar hue, and, singly, reminded one of Dr. Miller and his stray straws. We inspected several hives, the queens and workers being wonderfully uniform in appearance, and all having the same characteristic of gentleness.

Many were the expressions of astonishment and admiration. Mr. Doolittle said, "This knocks the wind out of my sails." Mr. Benton expressed a very decided opinion that a new breed of bees had been originated. Mr. Calvert thought they had some bees just as quiet at the "Home of the Honey-Bees." Most of us were speechless, but like the noted parrot, "thought the more." It was a new thing under the sun to all of us. We "lingered near" like Mary's little lamb, and inwardly wished that all our apiaries were stocked with bees of a similar disposition. We admired the drones, next to the queens. Big, burly "fellows" nearly as yellow all over as the queens, and very much alike in size and marking—we thought what desirable fathers they were! The workers were large, shapely, and active in their movements. Mr. McArthur assured us that their working qualities were all that could be desired. It looked liked it, for at the close of a very bad season the hives were well stocked with stores, and some extracting had been done. The bees were busy on melilot clover, of which two varieties have been sown—the white and yellow—the white being apparently most frequented by the bees. They were also at work on the golden-rod, of which there are two species in bloom, one the common kind with spiral and bent-over heads, and the other having a flat head and somewhat brighter color. Mr. McArthur considers the flat-top variety the best honey-yielder. A large number of other flowers were in bloom, and a late crop of white clover seemed to be giving nectar, for the bees were thick upon it. The profusion of flowers made it look more like spring than fall.

It is not necessary here to detail the minutia of Mr. McArthur's efforts to establish a race of pure-bred and docile bees. A full account of the process from his own pen may be found in two numbers of the American Bee Journal—those of Nov. 29, and Dec. 6, 1894. I may just say, for the information of those who have no file of the journal named to refer to, that Mr. McArthur commenced operations with a choice Carniolan queen, and some hand-picked Italian drones of the old J. H. Thomas, of Brooklyn, Ont., stock. Crossing has been carried to the 24th degree, and, from the 17th cross, Mr. McArthur thinks the strain has been fully established. There has been no "harking back" since then. The course pursued has been similar to that adopted by the great cattle-breeders, to whom we are indebted for the Shorthorn, Hereford, Jersey, and other bovine races, with two important points of difference. First, sire and daughter cannot couple, nor mother and son, because the sire dies at mating, and the mother is fertilized but once during her life-time. A second important difference is that the strongest, fleetest, and best drone secures possession of the virgin queen when she takes her wedding flight. So the principles of "natural selection" and "survival of the fittest" have full swing. This therefore cannot be called "in-and-in breeding," such as must be practiced to establish a race of cattle. Yet in spite of the closest relationship between sire and mother, in breeding choice races of cattle, vigorous and healthful progeny is obtained. In breeding bees, the guaranties for this are much more certain, for the reasons just given.

After the convention was over, the writer took time to visit Mr. McArthur's home apiary, and melilot clover plantations. The apiary is located close to one of the frequented thoroughfares in the city. The trolley cars run within 50 feet of the bee-hives, and foot passengers throng still nearer. But the bees annoy no one. A similar process of rough handling to that witnessed on the Island was gone through here, with the same result. Bees were scooped up by the handful, and the operators breath was blown on them in close puffs, but not a bee hoisted its tail, or showed the slightest sign either of anger or disturbance. "It was never so seen in Israel," or anywhere in the course of my travels and observations among bees.

Mr. McArthur is as peculiarly well situated for the cultivation of bee-forage, as he is for the production of pure and quiet bees. His home is on the bank of a high and steep ravine, which stretches along in a curve all around North Toronto. There are hundreds of acres too steep to be climbed by cattle. Here his bee-forage can flourish undisturbed by man or beast. For a number of years he has been sowing honey-yielding plants of all kinds in these places, which may almost be said to be accessible only to bees. The extent of his seedings may be gathered from the fact that he expects to harvest at least a hundred bushels of melilot clover seed alone this fall, besides golden-rod, catnip, mint, mignonette and other nectar-giving plants "too numerous to mention."

Mr. McArthur is enthusiastic in his praise of melilot clover, not only as a bee-forage, but for general agricultural purposes. He showed me where an old lady lives, who has several cows that have lived all summer and given abundance of milk by cropping at one of his melilot plantations. This plant grows on barren soils, and flourishes in spite of the worst spells of drought. Horses as well as cows eat it freely. The taste appears to be an acquired one, but once established, is like the fondness of human beings for tomatoes. It stays. Mr. McArthur has also a very high opinion of the plant on account of its value as a fertilizer, which he thinks only second to that of red clover.

As a Canadian bee-keeper, I am proud of the work done by two of my fellow-countrymen in the way of improving the races of bees. Mr. D. A. Jones was the pioneer in the work, and spent a large amount of time and money in testing various breeds of bees on isolated islands in the Georgian Bay. He had Holy Island, Cyprus Island and Italy Island, and demonstrated the superiority of the Italians to his entire satisfaction. Now, Mr. McArthur on Toronto Island seems to have discovered that the blending of the two gentlest known races of bees results in a breed more amiable than either. Personal inspection on the part of so large a number of practical bee-keepers during and just after the recent convention, dispels all doubt that a great and good work has been done, for "in the mouth of many witnesses shall every word be established."

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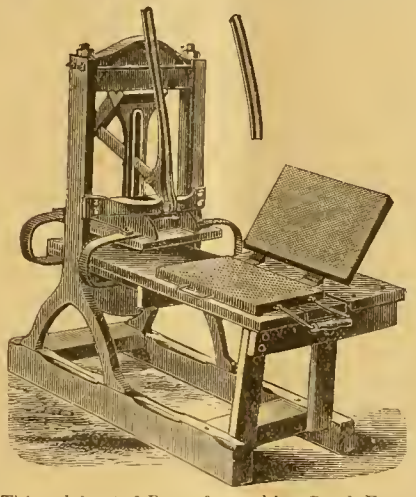

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General Items.

Bees Paid Well.

In 1893 and 1894 we had to feed our bees to keep them through the winter, but this season they are trying themselves. Those that took care of them and fed them, so as to winter them safe, and they are few, are now getting from 100 to 150 pounds per colony. I have two colonies that will produce nearly 136 pounds each. I kept them at work, so they did not swarm. I had four colonies last fall, and got them through safe (packed them—see American Bee Journal for June 14, 1893), but in the spring they were weak, so I united them into two colonies, and they have paid well for it all.

T. HOLLINGWORTH.

DeWitt, Nebr., Sept. 12.

A Good Season, After All.

We have had a most singular year so far. The spring opened three weeks earlier than usual. I put my bees on the summer stands (a part of them) the latter part of March; the weather was fine, and continued so into April and May. We looked for a big honey crop, but alas! there came a change in the aspect of things; the hives in early May were full of bees, and in the best of condition to gather in the nectar from the white clover and other bloom. The heavy freezing we had killed all the basswood bloom, as well as most of the raspberries—in fact, it looked as though we were doomed to have a total failure in the honey crop—the first time in 30 years. The bees began to lug out the drones all through the month of July; there was but little swarming.

But a change has come for the better. Since August came in, honey has come in, and now the bees are coming in loaded, and are rushing the business. Some of the colonies have filled the second set of supers. One of my neighbors said he would get, or had gotten, 150 pounds of section honey from three colonies. The honey is gathered mostly, if not wholly, from wild flowers, of which the golden-rod bears a most conspicuous part. We are selling honey for 15 cents per pound. It is of excellent quality, very white, and of heavy body, or "thick," as some would say. We in this northern region use mostly the 8 and 10 frame standard Langstroth hives, and winter our bees in cellars.

L. ALLEN.

Loyal, Clark Co., Wis., Sept. 16.

Experience with Bees, Etc.

When a mere boy, 50 years ago, it was my delight to go off in the morning with my father, take a twist of rags on fire, and blow the smoke on the bees after he had pried off the head of a "gum" with an axe. We would go from hive to hive in this way, until we would have a washtub full of honey. In those days I never heard any such thing as paralysis among bees. On reading on page 587, where A. E. H. asks, "What Ails the Bees?" I would say, in my opinion they had only been housed in the hive for some time on account of cold, and when it got warm enough for them to fly out they emptied themselves as they always do on flying out. A great many people call this "diarrhea," as it looks very much so, although it is nothing more than all colonies do when housed for several days. When they return to their hive they again fill themselves, and never eat another drop after filling themselves until they again fly out, and have another spell of "diarrhea." As for bees crawling on the ground, as he claims, I never saw the like, unless a colony was queenless.

I have handled bees for myself constantly for 40 years. I have never used anything but box-hives and black bees. I have always been a lover of bees, and a close observer of their manners. Still I can learn daily, and I think the best of us can learn

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yet. But I do feel that by some the bee-question in lots of cases has gotten entirely ahead of the bee.

I have this season had my first colony of Italian bees, which seem much superior to my blacks, in many points. I have re-queened three more colonies, and next season I aim to have all of my bees in improved hives. Still, in my opinion, there can be an improvement made on the shallow frame hives. I think they are all right for summer use, but too shallow for wintering.

I want to say a word about non-swarming bees. Last season all the bees, to my knowledge, for miles around were non-swarming bees. It was the driest season I ever saw. My bees killed off their drones in early May, and to my knowledge not a swarm of bees issued for miles around me. My father used to keep some non-swarming colonies in great big logs, some four feet long, set on end, and roofed with lumber, nailed on slanting one way. I never knew those bees to swarm. You say why? Simply because they had plenty of room to work all the brood they could rear.

ANDY COTTON.

Pollock, Mo., Sept. 16.

Honey from Cotton-Bloom.

I notice on page 576, J. J. K. seems to doubt Dr. Brown's statement as to bees working on cotton-bloom. Perhaps cotton is somewhat like strawberries in secreting nectar, for my bees do work on cotton, and do not on strawberries.

The latter part of July I noticed my bees were working rapidly from 5:30 p.m. until dark. In passing under their line of travel I was attracted by the loud humming noise, as almost all bees were coming and going in the same path. I thought at first they were working on sunflowers, but I could never find enough bees on them to account for all this noise. So one evening, after becoming anxious to know what they had found that was yielding nectar so well, I started out in the direction the bees were going as they left the apiary, and in a large field of cotton I found the bees well scattered over the field, busy at work on the cotton-bloom. The bees did not go inside the blooms, but were running their tongues down between the ball and calyx, where, on examination, I found nectar in sufficient quantity to justify their excitement. This nectar was very clear, and tasted more like ripened honey than any I have ever tasted.

The bees crowded the brood-chambers with this cotton honey, and stored a few pounds of surplus before the flow was cut short by drouth. This honey is quite light in color, and of good flavor.

We have had no rain to amount to anything since July 11, and bees are getting only pollen. CHAS. HILL.

Bonham, Tex., Sept. 18.

Buckwheat in New Mexico.

On page 576 is a letter from Jno. Pinyan, of Aztec, New Mexico, wishing some reader of the "Old Reliable" to tell him what buckwheat is worth as a honey-plant in a country where no dew falls. Eight years ago I got seed of the European Silverhull buckwheat, which I continued to raise for four consecutive seasons. My bees worked on it for just 30 days each season. Its yield of nectar for the time it is in bloom is far greater than that of cleome (*integrifolia*) or Rocky Mountain bee-plant. The honey is very thick, and of excellent flavor, but of dark color; therefore, it does not sell as well as honey produced from alfalfa.

He says we have a delightful climate here. Well, that is correct, but in my 11 years' residence here, I have not seen the country covered with wild flowers, and as I am making a specialty of keeping bees for the dollars and cents there are in it, I certainly should have noticed it. I live 16 miles northwest of Mr. Pinyan, and I do not think there is so much difference in the country as that.

The honey-flow for this season is now over. In counting up, I find I have an average for the season of 58 pounds per colony. Last season, my average was 69 pounds per colony. G. H. EVERSOLE.

La Plata, New Mex., Sept. 13.

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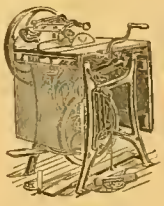

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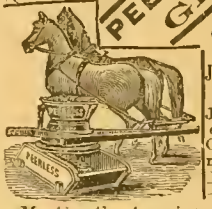

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C. F. MUTH & SON, cor. Freeman & Central avs

Convention Notices.

MINNESOTA.—The next meeting of the Southern Minnesota Bee-Keepers' Association will be held at Winona, Oct. 15 and 16, 1895. All members are urgently requested to attend. All bee-keepers and others interested are cordially invited. E. C. CORNWELL, Sec. Winona, Minn.

POULTRY BUSINESS.—Every farmer should be a poultryman, and every poultryman should know how to breed successfully. The expert in the poultry business is a very valuable person. Jno. Bauscher, Jr., poultryman and seedsman, Freeport, Ill., sends out a book for the nominal cost of 10 cents, which describes the various breeds, and gives much other valuable information concerning poultry-raising. Mr. Bauscher's stock this year is in very excellent shape—he states better than ever before. Send for the book, and say you saw it mentioned in the American Bee Journal.

Binders for this size of the American Bee Journal we can furnish for 75 cents each, postpaid; or we will club it with the Bee Journal for a year—both for $1.60. We have a few of the old size (6x9) Binders left, that we will mail for only 40 cents each, to close them out.

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

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Honey & Beeswax Market Quotations.

CHICAGO, ILL., Aug. 25.—We are having considerable inquiry for comb honey. We have as yet received but a few small consignments. We quote: Fancy white, 15c.; No. 1 white, 14c. Extracted, 5@7c.
Beeswax, 25@27c. J. A. L.

KANSAS CITY, Mo., Oct. 4.—The demand for comb is fair, with a fair supply; extracted in light demand. We quote: No. 1 white, 1-lbs., 13@14c.; No. 2, 12@13c.; No. 1 amber, 11@12c; No. 2, 8@10c. Extracted, white, 6@6½c.; amber, 5@5½c.; dark, 4½c.
Beeswax, 20@21c. C. C. C. & Co.

PHILADELPHIA, PA., Aug. 19.—New crop of comb honey is coming in more freely and generally in good condition. Demand is now beginning to spring up. New extracted is arriving in a small way. We quote: Fancy comb, 14@15c.; good, 13c.; fair, 9@11c. Extracted, 4½@5½c. It is hard to get our market to rally after the blow it received in the spring on discovering such a large amount of beeswax adulterated. We quote pure wax, 22@25c. W. A. S.

ALBANY, N. Y., Oct. 7.—Receipts of honey, as well as demand, have increased some, and the weather being cooler, I think this month and forepart of next, as usual, will be the best time to market honey. We quote: White comb, 14@15c.; mixed, 12@13c.; dark, 10@12c. Extracted, white, 6½@7½c.; mixed, 6@6½c.; buckwheat, 5@5½c. H. R. W.

CHICAGO, ILL., Sep. 4.—The new crop is coming forward and sells at 15@16c. for best lots; dark grades, 9@12c. Extracted ranges from 6@7c. for white, and 5@5½c. for colored, flavor and package making difference in price.
Beeswax, 27@28c. R. A. B. & Co.

BUFFALO, N. Y., Sept. 16.—Light receipts are prevailing in our market and demand is improving. We quote: Fancy one pound sections, 15@16c.; choice, 13@14c.; buckwheat, slow sales at 8@10c. B. & Co.

CINCINNATI, O., Sept. 18.—Demand is very good for all kinds of new honey, while supply is scant. We quote; Comb honey, 12@16c.; extracted, 4@7c. on arrival.
Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. M. & S.

CHICAGO, ILL., Oct. 3.—With colder weather and fruits out of the market, we look for a good demand for honey, as maple sugar and maple syrup are very high and scarce. We quote: Fancy white comb, retail, 15c., wholesale, 14c.; No. 2 white, 13c.; amber, 11@12c. Extracted, as to quality and package, 5½@6½c. Beeswax, 30c. S. T. F. & CO.

NEW YORK, N. Y., Sept. 11.—New crop of comb honey is arriving and while the receipts from N. Y. State are light, we are receiving large quantities from California. Had two cars of choice comb and have several more to follow. On account of warm weather the demand is rather light as yet. We quote: Fancy white, 1-lbs., 15@16c.; fair white, 12@13c. No demand as yet for buckwheat and dark honey. Extracted is plentiful, especially California and Southern. We quote: California, 5@5½c.; white clover and basswood, 6@6½c.; Southern, 45@55c. a gallon.
Beeswax in fair demand and firm at 28@29c. H. B. & S.

NEW YORK, N. Y., Sept. 23.—The market for comb and extracted honey is now open. Comb honey is not arriving as freely as expected, presumably on account of the prolonged heat, but it is selling very well, considering the hot weather we have had this time of the year. Of extracted honey there is quite a supply on the market; California and Southern with a fair demand. We are quoting comb honey to-day as follows: Fancy, 1-lbs., 15c.; 2-lbs., 14@15c.; white, 1-lbs., 13@14c.; 2-lbs., 12@13c.; fair, 1-lbs., 11@12c.; 2-lbs., 10@11c.; buckwheat, 1-lbs., 10@11c.; 2-lbs., 8@9c. Extracted, clover, 5@7c; buckwheat, 5@5½c.; Southern, 50@60c. per gallon.
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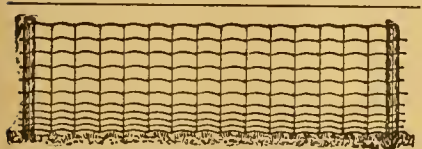

SAVED BY A DREAM.

Farmer Oak setting posts for Page fence is set upon by another agent, with a machine to "make it yourself, just as good," etc., etc., who soon talks him to sleep. He dreams he's back at the World's Fair, almost famished, can't live without a good cup of coffee, quick. Meets stranger with machine, "You buy the green berry, anything cheap, roast carefully grind in this: p-e-r-f-e-c-t-l-y d-e-l-i-c-i-o-u-s." "Oh, yes, of course, you must steep it, and sugar and cream it, takes a little time, but it's so cheap." Here the nightmare kicks the agent off the field and brings farmer O. to his senses, and he'll use the Page.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Mention the American Bee Journal.

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Color and Odor of Foundation.

Query 991.—I have received samples of foundation from different makers. Some of these samples have the natural odor of beeswax. Other samples, lighter in color, have this odor conspicuously absent.

1. What makes the difference in odor and color?

2. Which kind would you prefer for your own use?—Colo.

R. L. Taylor—1. Bleaching, principally. 2. The unbleached.

B. Taylor—1. I do not know. 2. I would choose the latter.

G. M. Doolittle—1. I don't know. 2. I see little difference in favor of either.

Mrs. L. Harrison—1. It may be from chemicals used in purifiying it. 2. Natural odor.

Jas. A. Stone—1. The bleaching. 2. That having the natural odor, if not the whitest.

W. R. Graham—1. Bleaching. 2. The unbleached, with all the natural odor of beeswax.

Dr. J. P. H. Brown—Fresh yellow wax is more odorous. The odor is gradually lost in bleaching.

Rev. E. T. Abbott—1. Ask the men who make it. 2. Foundation made out of pure beeswax only.

Prof. A. J. Cook—1. I think age and care in rendering wax. 2. I have liked the former. It may be mere fancy.

P. H. Elwood—1. It is said that the use of sulphuric acid destroys this odor. 2. I should prefer to retain the odor.

J. A. Green—1. Possibly the beeswax has been refined by the use of acid, which destroys the odor to a large extent. 2. The former.

C. H. Dibbern—1. Difference in method of rendering the wax or adulteration. 2. I should take the foundation with natural odor and color.

J. E. Pond—1. I don't know. 2. I think the natural odor, but if it came from a reliable party, I should take one as soon as the other.

Dr. C. C. Miller—1. The lighter may be somewhat bleached. 2. I'd rather see the two before deciding. I'd probably take the softest.

J. M. Hambaugh—1. I don't know. Age may have something to do with it. 2. Light grades for surplus honey; the darker grades for the brood chamber.

W. G. Larrabee—1. Perhaps southern or western wax will not have the same odor as northern or eastern. 2. I prefer that with the natural odor. I want to hear from Dadant & Son.

H. D. Cutting—Sulphuric acid will remove impurities and I think some of the odor as well, yet I have seen and used large quantities of foundation that was cleaned with acid with the best results.

G. W. Demaree—1. The difference in the "odor" and "color" of the samples you refer to, is the result of the different processes employed in rendering and purifying the wax. Beeswax when bleached by any known process loses its virgin *odor*. Lay a comb on a hive cover, in the hot sun, and the wax that runs from the comb will be yellow and have a pleasant odor; let it be exposed to the sun and dews for a few days and it will become lighter in color and loses its ordor. 2. I prefer the unbleached wax for foundation, because it is more rapidly worked by the bees.

Chas. Dadant & Son—We want that which has the smell of beeswax, though sometimes the absence of it is only due to melting over several times. But the use of acids destroys that fine smell entirely.

E. France—1. Wax made from cappings is lighter in color and has not as much odor of bees as that made from old combs. 2. White wax for sections. For brood-combs there is not much choice.

Rev. M. Mahin—1. I presume that the lighter colored and almost odorless is made from cappings of combs. 2. I would prefer the light for sections, and the yellow for the brood-combs, because I think it is stronger.

J. M. Jenkins—1. The first is good wax, uninjured by acids or overheating; while the latter has been "cooked," or, mayhap, purified (?) by use of too much acid. 2. The first, as it is more pliant and stronger—the more like *wax*—it is more acceptable to the bees.

Mrs. J. N. Heater—1. Sometimes ingredients and methods used to bleach the wax, and sometimes lye and other stuff used to prevent the sheets of wax from sticking to the rolls. 2. I prefer that which has the natural color and odor, and is all pure beeswax.

Eugene Secor—1. Bleaching makes a difference in color, and perhaps in odor, but I am not sure. 2. I use only pure wax foundation made by such skillful and honest manufacturers as Dadant, VanDeusen, etc., and I have never detected a lack of proper wax odor.

Allen Pringle—1. According to my experience the sun will take the color out of the wax by bleaching it, while the heat of the stove or furnace will take the odor out to a certain extent. A high temperature will do it. 2. I should prefer the foundation with natural color and odor of the wax.

W. M. Barnum—1. I think age will affect considerably the odor of foundation. There is certainly a difference in foundation, but I am entirely unfamiliar with the method used. 2. I prefer the kind that "suits me best." This is the best rule for all to follow, even if it costs a little more. Get samples from different dealers, and in your order specify plainly that you want a fresh article. This will generally bring it.

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Pat. Reissued July 9, 1894.

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W. Z. Hutchinson, Flint, Mich.

Don't Fail to Read the Liberal Premium Offers on Page 658 of this Number.

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Will be made on the Foundation sold by us this year. That is why

WE NEED BEESWAX.

Now is the time to order your Foundation for 1896. Although the

PRICES ARE REDUCED

on both Beeswax and Foundation for the balance of the season, we want all

The Beeswax You Have to Offer.

☞ Send for Catalogue of **Bee-Supplies, Langstroth Revised, etc.**

CHAS. DADANT & SON,
Mention the American Bee Journal. **HAMILTON, Hancock Co., ILL.**

IT TELLS ITS OWN STORY !

We are receiving hundreds of **Testimonials** speaking of the **High Quality** of the goods that are turned out by us; but we have space for and reproduce on the advertising pages of the various bee-periodicals only a very few. In addition to the one already given recently, here is one that tells its own story:

THE A. I. ROOT CO.:—I must compliment you on the degree of perfection to which you have attained in the manufacture of bee-supplies. I have been, as you may know, in the bee-business for about 20 years; and during that time I have obtained my supplies from many manufacturers, north and south, but have not found any that would compare favorably with the goods made and sold by you, either in quality of material used or in workmanship, so I have settled back permanently on the A. I. Root Co. as my base of supplies.

Eddy, N. Mex. J. SINGLETON.

We are making preparations to nearly double our capacity for turning out goods; and do you wonder at it after reading such letters as the above? Send to the A. I. Root Co. for large, illustrated catalog.

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AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS

35th Year. CHICAGO, ILL., OCT. 17, 1895. No. 42.

Report of the Proceedings

OF THE

Twenty-Sixth Annual Convention

OF THE

North American Bee-Keepers' Association,

HELD AT

TORONTO, Ont., Sept. 4, 5 and 6, 1895.

W. Z. HUTCHINSON, SEC.

(Continued from page 648.)

SECOND DAY—WEDNESDAY EVENING SESSION.

At the opening of this session the convention was greeted by a new "Convention Song," written by the Hon. Eugene Secor, and set to music by Dr. C. C. Miller. It was sung by Thos. G. Newman, J. T. Calvert, G. W. York, and Miss Carrie Root.

The Address of Welcome.

At the close of the song an address of welcome was given by Hon. John Dryden, Minister of Agriculture, who said he appreciated the honor of addressing the convention, first of all, because the delegates came from so large a district; secondly, because the convention contained many eminent men, practical men whom he had heard of, whose reputation had reached him. He expected to have a pleasant time while present, because bee-men were a social lot of fellows, and their wives could beat them in sociality. Bee-keepers were diligent men; they learn to be diligent from the busy little bee, and they learn gentleness as they deal gently with these little creatures, which are, however, able to make themselves felt in a most uncomfortable manner, if you stir them up.

He was not acquainted with a great many United States bee-keepers, but thought he would not be wrong in saying that he knew a great many bee-keepers in the Province of Ontario. He thought he could count on the Ontario bee-keepers as his own particular friends, and he wished he could say as much for the bees as for the bee-keepers, for he had never yet come in contact with a hive of bees that he could consider friendly; they always gave him a warning not to approach too closely. He did not know why the bees should be antagonistic to him, because he had personally interested himself on their behalf. In the Legislature he had undertaken to pass a bill which some people said could not be passed—a bill to prevent the spraying of fruit-trees while the bees were gathering honey.

Continuing, the speaker said: "The duty I have to perform this evening, that of welcoming you to the city, is a very pleasant one, and I want specially to emphasize the welcome to those who are strangers to us, to those who are visitors to this country. I hope you will have a pleasant time, full of happiness, joy and pleasure, while you are here. I know it is possible for you to enjoy yourselves, and I think I have a right to say, on behalf of all our people, I give you who are strangers among us a right royal welcome.

"I would like to let you know that when I am welcoming you to this Dominion, comprising the different Provinces, which are content to live under the protection of the British flag, I am welcoming you to the larger half of the continent of America. We do not want you to forget that; and I want you to try to think of the immense resources of this Dominion of ours. Its fertile plains, where an abundant harvest has been reaped; its hills with their enormous mineral wealth; its bracing and salubrious climate, and then say if we cannot raise a sturdy race of citizens."

He drew attention to the educational system of the country with its well-equipped schools. Collegiate Institutes and colleges, where the education was free and where the poorest had a chance to raise himself up to a high place in the land, and which institutions were helping to form a nation that would be an example to the world. He asked them to look at the statute of the Province, which they in Ontario were all proud of; also to notice the progress made in agriculture. In Ontario, he said, they had associations of all kinds for the betterment and enlightenment of the farmer, which, he was glad to say, were well patronized.

The speaker said he would like to invite them to stay over the next week when the Exhibition would be in full blast, when the thousands of people would be there from all parts of the Province. He would ask his auditors, if they stayed, to notice the people's faces, to read their intelligence, to mark their manly bearing, and especially to notice their good behavior, for he said he was proud of the behavior of the people of Ontario.

He then went on to speak of the splendid success of Canadian farmers at the World's Fair, where, he said, they did not have to take a back seat, and continuing he said: "When you have noticed all this and have returned to your homes and told of our sturdy patriotism, contentment and prosperity, I think we will not hear any more of your annexing us to the States, but rather to the contrary."

He then spoke of the benefits to bee-keeping these associations had conferred, and closed by wishing them every success.

PRESIDENT MILLS' ADDRESS.

A short address was also given by Dr. James Mills, President Ontario Agricultural College, of Guelph, who brought greetings from the college to the convention. He then went on to show the good work that had been done by the association, (1), by pointing out to farmers the possibilities and advantages of bee-keeping; (2), by introducing new appliances tending to cheapen the product, and (3), by legislation to prevent disease, etc. He pointed out that the great bulk of honey now came from farmers, and said that if the matter of bee-keeping was better understood by farmers it would be a subsidiary to farming, and a means of increasing their income.

At the conclusion of the speeches a hearty vote of thanks was unanimously tendered to the speakers. They were also, by unanimous vote, made honorary members of the society.

Following the addresses, came an essay by Hon. R. L. Taylor, on the subject

How the Bee-Keepers Might Receive More Benefits from the Experiment Stations.

I shall attempt to answer the question implied in the subject given me, briefly, under eight heads, as follows:

First, by the increase of the number and resources of the apiarian adjuncts to the experiment stations. Of course, the most conscientious and ablest men whom it is possible to obtain should have charge of these branches of the experiment stations, but such men cannot well be got unless the stipend granted is sufficient to enable them to do credit to themselves, and to their office without too much risk of financial loss. The apiarian branches of the stations, too, may still be counted, I believe, upon the fingers of one hand. The number ought to,

and might, be doubled within one year. This, with a substantial increase of resources, can be had by courage and organized effort. Those who have the decision of these matters are men like ourselves, and subject to the same influences. As a rule, they earnestly desire to do what is right. They are quite willing to listen to our requests and to the reasons for them. But bee-keepers must remember that organization creates the force that doubles the power of influence and makes it effective.

Second, by the encouragement of those in charge of the experiments, by the manifestation of a more active interest in the work on the part of bee-keepers. The experimenters are human. To some extent they are feeling their way, for the work is new. They would like to know that the importance of the work itself, if not their particular part in it, is appreciated. Such a knowledge would prove a powerful stimulus to the production of more valuable results.

Third, by the more active co-operation of apiarian journals. Many valuable hints might be given by the editors and their

Hon. R. L. Taylor, Lapeer, Mich.

able correspondents. I do not seek flattery, nor even just praise. Courageous, incisive, honest criticism would be more welcome. If the journals do not disclose interest in the work, it is likely to die early.

Fourth, from confirmatory experiments undertaken by individual bee-keepers. Reports of such experiments would prove a valuable aid in determining the value of results obtained at the stations; but, better than that, such experiments would be an education to the individuals and at the same time would make the fact manifest that bee-keepers are interested.

Fifth, experiment stations are not to be employed for the benefit of existing apiarists only—they should be used for the advantage of the whole people. Most of the honey-resources are made to yield nothing for want of bees to gather the offerings. It would evidently be for the advantage of the country if all its surface which produces honey-secreting flora in any abundance were dotted with apiaries no more than three miles apart. To accomplish this, or even to make a beginning at it, would require the popularizing of bee-keeping. Apiarian lectures and discussions, under the auspices of the station in imitation of the course pursued in some other rural branches, could not fail to be fruitful. But it will be objected that this would not benefit bee-keepers. It is true it would not benefit an existing apiarist as such, but it would as a citizen. My respect for a man receives a severe check when I learn that he is willing to prosper financially at the expense of the well-being of his country. This work cannot be done unless the favorable influence of bee-keeper is felt by those who control the resources of the experiment stations. With proper support from the stations, this work would be successful.

Bee-keepers conventions are not always well attended, because only bee-keepers are invited, and they, in order to attend, must generally go long distances; but let competent men go into the country school-houses, in districts where the farming communities are starving for want of social and intellectual excitement, during the months when they enjoy comparative leisure, to speak on this subject, with an invitation to everybody, and the seats would be crowded with eager listeners.

Sixth, by the earliest possible publication of the results of experiments made by those in charge of the station apiaries, in the apicultural journals. The importance of this is manifest. The journals cannot conveniently criticise in a proper manner the work of the stations if the entire report of that whole year comes in a body. For similar reasons it would be much more profitable to the bee-keepers if he were allowed to digest it in sections, than to be expected to perform that operation at a sitting, at the end of the year. At best, the reports are dry reading, so that they *must* be served in moderate portions if they are to be generally digested at all.

Seventh, by the co-operation of the several persons in charge of the apicultural departments of the experiment stations, and all perhaps under the direction, in a sort of advisory way, of the united North American Bee-Keepers' Association and the Bee-Keepers' Union, should the "marriage" of these organizations be happily accomplished. Such co-operation would be used in securing confirmatory experiments under different supervision, where such were deemed advisable, and to prevent repetitions when they could be attended by no valuable result.

Last, but I may safely add, not least, by the advent of better honey seasons. In my opinion, many of the more important lines of experimentation depend for their success upon swarming, or on abundant honey-flows, or both. Neither has occurred here for the last two years—an embarrassing state of things when considerable preparation has been made for work depending upon them. But times change; what has been will be again, old time honey-flows will surely return, and "we will reap if we faint not." R. L. TAYLOR.

Lapeer, Mich., Aug. 30, 1895.

Dr. Jas. Mills—No director knows so well what ought to be done as do the practical bee-keepers themselves.

Dr. Mason—The Doctor is right. I have often thought how much better work would be done by the experimenter if we would only give them puzzling things to work out. I think it would be well if several stations were to do the same line of work, that we might compare results.

R. F. Holtermann—I think more should be done to put the results before the public in such a way that they will be better understood. We may work part of the season on some line of experiment, and then find that something that has been overlooked has destroyed the value of our work. For this reason there should be frequent criticisms and suggestions from the rank and file of bee-keepers.

Thos. G. Newman—Mr. Taylor is correct. Bee-keepers ought to frequently write the experimenters, and the reports should be published piece-meal.

Allen Pringle—To get any value from these experiments, they must be of the proper nature. In this country, wintering is of the greatest importance. I wish to ask if anything of this line is to be taken up in our college?

Dr. Mills—That is the intention.

L. A. Aspinwall—I would suggest that something might be done in the way of controlling the fertilization of queens by clipping their wings about ⅛ of an inch. This lessens their powers of flight and keeps them in a lower plane and near the apiary. Choice drones may be restrained in the same manner, and thus these and the queens may be brought together. I have clipped queens in this manner and had them mated.

G. W. York—If Mr. Taylor expects more help from the journals, he ought to send out his reports in duplicate to all of them.

At this point the discussion drifted to

Crimson Clover.

Dr. Mills said it winter-killed at Guelph, Ont.

J. T. Calvert—At Medina, Ohio, some of it came through the winter all right, because, by mistake, something else was sown with it that came up and protected it.

George Spitler—The Crimson clover thrives with us. We sow it in the spring and it lives through the winter, and does well the next year—in eastern Pennsylvania.

Allen Pringle—Are you *sure* that it is the same plant that starts up in the spring from your sowing, that lives over the winter?

Mr. Spitler—I am not *sure*. It may be that it goes to seed, and that the seed grows and starts another crop that lives over. I only know that we sow it in the spring and that we have a fine crop the next year. The honey is fine.

The convention then adjorned till Friday morning, at 9 o'clock. (*Continued on page 677*).

Contributed Articles.

On Important Apiarian Subjects.

Non-Swarming Bees—Can the Swarming Instinct be Bred Out?

BY A. NORTON.

After reading the article by Mr. Bert Lownes, on page 549, it seems that he has certainly made a logical and convincing argument. But, upon looking at the matter further, I still feel compelled to say, "Well, perhaps; possibly the swarming impulse might be bred out, or lessened in a very great degree." And yet, this is one of the fundamental and most important instincts of bee-nature.

Darwin showed in his time that instinct is acquirable as well as hereditary, and that traits primarily wanting in certain species have been gradually acquired and transmitted. He applied this directly to certain animals and birds.

Now, with reference to bees, the question why swarming, or under what motives they swarm, which we often see discussed so gravely and absurdly in the papers, may be taken as an axiom, or self-evident matter. They swarm because, in a state of nature, they must do so in order to multiply; and swarming is an indispensable requisite to the perpetuation of the species. As well might we ask, why do plants produce flowers with stamens and pistils? Stamens and pistils are essential to the formation of seeds; and with many or most phænerogamous plants, as the apple, grape, orange and lemon, for example, the production of seed is, in a state of nature, as necessary to the perpetuation of the species as swarming is with bees.

I remember reading, years ago, an article by an agricultural writer (it seems to me it was Horace Greeley) in which strong ground was taken against the possibility of producing seedless varieties of certain fruits. He argued that, if fertilized, the seed must necessarily be perfected, and, if not fertilized, the ovary and other seed envelopes couldn't thicken out, for the reason that fertilization is necessary to the development of these organs as well as of the seeds themselves. His argument was logical, and he made out as good a case against seedless fruit as Mr. Lownes has made against non-swarming bees; and yet, to-day, nearly, and, for all practical purposes, wholly seedless oranges, lemons and raisins are accomplished facts.

Let us extend the question and ask, Why do hens sit? Again the answer is axiomatic. They sit because, in a state of nature and with the characteristics of fowls, incubation is absolutely necessary to the perpetuation of the species. It is more directly necessary than is swarming with bees; because, if bees were not subject to the depredations of various enemies—as moths, bears, men, etc., or to the inroads of disease, whereby the number of colonies might be lessened—they could go on indefinitely maintaining the numbers in the respective colonies, and thus could preserve these intact without even swarming at all. They simply would not increase. But fowls would quickly die out if the hens did not sit.

Hence, in a state of nature, as in the original jungle-fowl, the sitting instinct in the hen is as powerful and as necessary as the disposition to lay eggs, and there is no such thing as a non-sitting hen. But man has eradicated this sitting instinct in several breeds, as for instance the Houdans, Crevecoeurs, Spanish, Leghorns, and Hamburghs.

Under the artificial culture of man, swarming of bees, seeding of fruits and sitting of hens are not respectively necessary for propagation and increase. And it seems that with these necessities removed, the possibilities of their natures expand within wider limits.

Mr. Lownes says he does not believe that, if the desire for swarming were entirely bred out, drones would be reared intentionally, or, rather, he *does* believe that *no* drones would be reared. This would not necessarily follow, at least not immediately, although it might or might not, ultimately.

In the seedless fruits, the plant develops stamens and pistils (not normal ones, of course) as before, as well as thick-fleshed ovaries, and the Houdan, Spanish, or other non-sitting hen is just as choice in selecting a nest and just as jealous of an intruding hen as is the Cochin which sits after every dozen of eggs.

According to a further extension of Mr. Lownes' reasoning as to the intentional production of drones, we might expect that when the incubating tendency had been bred out of a hen, she would lay in any nest that might come handy, or would even drop her eggs wherever she might be, without seeking a nest at all. Such features do not necessarily follow.

Now, please bear in mind that I don't say the swarming instinct has been bred out. I could not substantiate such an assertion. I believe that to breed almost any trait or tendency into a race, there must be more or less of it found there to begin with; and to breed it out there must be found some original tendency toward a lack of it to begin with. As different races of bees show differing degrees of swarming instinct (and I deny that this depends upon the prolificness of the queen, as claimed by Mr. Lownes) I am only arguing that it is within the possible that non-swarming bees may yet be produced.

Now for the reports of facts from those who have tried any breeders' non-swarming strains. Remember, however, how convincing an argument, the fact of there being no non-sitting hens would have been in case of a hen argument before non-sitters had been produced.

Montgomery, Calif.

What Dr. Miller Thinks.

HOME-MADE FOUNDATION.—Hugh L. Lynn, on page 634, speaks favorably of making his own foundation, but deplores the mussiness of dipping the sheets. Perhaps he might try one of the Rietsche presses so popular in Germany, which requires no dipping of sheets, just pouring in the melted wax. The A. I. Root Co. tried one of them and discarded it as worthless, but if Mr. Lynn should get their discarded machine he might like it better. At any rate there are some seven or eight thousand such presses in use across the water.

DON'T DECIDE HASTILY.—On page 639, J. H. Tichenor reports more than three times as much honey from a Langstroth as from a square hive, and then says, "Now, if it isn't the hives that make the difference, what is it?" I don't know, and I don't know which hive is best, but I feel pretty sure, Friend Tichenor, that you'll not find the same difference kept up year after year. One of the perpetual puzzles is to determine why it is that so often two colonies, standing side by side, in the same hives, apparently the same in every respect, should produce such different results. Of course there must be a difference in the colonies, but it isn't always a difference that can be detected. In your case, however, it is not hard to account for at least part of the difference. The hive that gave the big yield swarmed once; the other twice. With the issuing of that second swarm probably went the prospect of many pounds of surplus.

ABUNDANT VENTILATION.—There used to be a great deal of discussion as to the kind of ventilation, upward or lower. Little is said nowadays in that direction, but there seems a strong current in favor of plenty of ventilation, however it may be secured. In the essay of F. A. Gemmill, on page 630, he advises upward ventilation with an entrance 4x⅜, but at the same time speaks well of having no upward ventilation, but "a generous—yes, even large—amount of lower ventilation." Just what he means by "large" it may be difficult to say, but it's an unfortunate thing that so many are not more specific in their utterances. Different readers will put different interpretations on the word "large," and it will probably be understood to mean an entrance of 8x⅜ all the way to an entrance of 24 square inches. Undoubtedly a smaller entrance is needed where the air passes up through the hive than where all is closed above.

In the discussion that followed, Mr. Pettit wanted the hive raised so as to have plenty of circulation, and Mr. Hall to get rid of moldy combs and dead bees. Substantially the same, aren't they, for the change of air prevents mold and death?

THOSE SUGGESTIONS AS TO THE NORTH AMERICAN.—On page 636 the editor does some planning for the next convention of the North American, and it might be worth while to get suggestions from all quarters and to discuss them thoroughly. Now is just the time to commence such suggestions and discussions.

Whether it be wise to have a convention at the same time and place as the meeting of the G. A. R. or not, one thing is pretty certain, so long as our conventions are so small that they of themselves can secure no reduced railroad rates, I believe it is the wise thing to have the convention in connection with something that *will* give us low rates.

On first thought, the idea of having a convention at the same time as the G. A. R. didn't seem exactly the thing. Too much of a jam. Something that would give us reduced rates

with more room would seem desirable. But then the G. A. R. gets lower rates than any smaller affair, and the reduction of rates extends over a larger scope of territory. If I remember rightly, there was talk of having the Washington convention at the same time the G. A. R. meeting, with astonishingly low rates, but for some reason it was held at another date, and the attendance was very small. On the whole, I'd like to see the experiment tried of having the North American shadow the G. A. R.

Suggestion number two may be all right, and it may not. I'll leave it for the present for some one else to discuss. I thoroughly believe in the wisdom of talking these things all over in advance. Brethren, take the floor and speak your mind.

Blind Following.—On page 630, G. M. Doolittle says: "There is too much blind following of those who write for the bee-papers, amongst the rank and file of bee-keepers, without trying to originate some thoughts and plans of their own." Yes, that's true perhaps with regard to too great a number, and yet I'm not sure but the opposite is true with a still larger number. In many a case there would be better success and less lamentation if there was a greater willingness to follow the lead of others. Large as may be the number of these who are willing to "go it blind" in the footsteps of others, the number is perhaps greater of those who think they must strike out in a path not previously trodden, and the untrodden path too often brings them to grief. Witness the number of hives invented by those who are merest novices in the business. The beginner with two colonies and a year's experience, has an irresistible impulse to invent some new thing or plan of his own, that very likely has been invented and rejected by a score of previous beginners just like himself.

Perhaps it would be a good thing to shake up in a bag the blind followers and the headlong inventors, and average them.

The Size of Dadants.—On page 631, in a paragraph concerning "Dadant's hives," the writer says, "In the discussion as to 8 and 10 frame hives, the Dadants have had very little to say, for they are both too small." I don't think either of the Dadants are remarkably small men, and I've seen them both. Neither are they small in mental equipment—there's nothing small about them in any way. The man who wrote that sentence must be small himself. Or can it mean that the 8 and 10 frame hives "are both too small" for the Dadants?

Quality of Sugar.—I'm glad to see C. Davenport on page 532 stir up a little the matter of pure sugar. I'd like to know whether all granulated sugar is pure, and if it is not I'd like to have some means of distinguishing that which is pure. I've seen a very distinct sediment of blue at the bottom of a hundred pounds or so of syrup. And I'd like to know whether beet sugar is, or is not, the same in its results as cane sugar. I think I've seen the statement that chemical analysis showed no difference. But sometimes things that are chemically the same do not produce the same results. Perhaps our good friend, Taylor, of the Experiment Station, could help us out.

Marengo, Ill.

A Talk on Hive Bottom-Boards.

BY T. I. DUGDALE.

As the subject of hive-covers seems to have been pretty thoroughly discussed in the various bee-papers, I now propose to take the dilemma by the other horn, and give a short talk on bottom-boards, believing that this subject is one well worth our careful consideration, if we wish to obtain the best results with any hive, and especially so if we winter our bees out-doors.

In referring to page 522, it is clear to me that A. A. D. and Dr. Miller do not understand the construction of the hive-bottom I use, hence I will try to explain it more clearly, and also answer the questions asked in regard to it.

I have been using this form of hive-bottom during the last five years under upwards of 100 colonies run for comb honey, so I have had a fair chance to watch results under nearly all circumstances that would be likely to present themselves.

These bottoms which I am about to describe, have no hummocks built on them, and, aside from travel-stain, etc., are nearly as clean as when first put in use. As stated in a former article, this bottom has a space under the entire lot of frames, ⅜ of an inch deep at the rear end, and slants towards the front end till the space is 1½ inches deep, leaving, in my hive, an opening 1½x12 inches. Into this opening is fitted a block of proper size to be easy of removal, and has the entrance proper cut in its lower edge 5/16x8 inches in length.

Now, instead of having a thick cleat at the rear end, and a thin one in front, to form the slant to the bottom, it is done by the cleat being nailed on each edge, and forms what might be called a sill. They need to be about three inches wide and are the same length as the outside dimension of the hive used. Also, one is required for the rear end the same width as the ones on the sides. It will be observed that these sills stand edge-wise when the bottom is under the hive.

The slanting board is cut enough shorter than the length required, to admit of being cleated on the front end to keep it from warping. I put on a cleat ⅞x1¼x12 inches, as all my hives are made of ⅞-inch lumber.

Now comes the secret of no hummocks on this bottom-board, for we havn't completed it yet; but supposing the frames in the hives to run from front to rear, we get out enough strips from ⅞-inch lumber to make an open grate or slat bottom. These strips are ⅛x⅞ inch, and long enough to reach across the slanting bottom, and are alternating—that is, a ⅛-inch space between each, similar to what a wash-board would be like if the space between the ridges was left open. These spaces are where the bees come up through from the entrance. Then on top of this false, or slat, bottom we have the regular bee-space, which is considered best for the bottom of the frames, viz., ⅜-inch.

In making this bottom there are several ways to accomplish the same results, but if I wished to avoid having combs and hummocks built in the open space, the slats across it on the break-joint plan are a necessity to secure success.

Hoping that this description will make it plain enough to be readily understood, I will now give a few reasons why I prefer it to the ordinary flat board.

It puts the colony of bees in better condition for winter, as all dead bees drop clear of the cluster into the open space under the slat bottom, and the entrance never fills us. All water runs outside, and air can have free circulation under all the frames. Dead bees are easy of removal; no cappings stay under the hive to harbor moth-worms; it is handy to introduce queens in candy cages, by simply removing the entrance-block if the colony is strong and queenless, and shoving the cage under, replacing block, and the thing is done. In very warm weather taking out the entrance-block gives the colony air and helps to prevent swarming. It is handy to have a big entrance when hiving swarms.

The above are a few of the most important uses of my style of bottom-board, although there are many other things I find it handy for.

West Galway, N. Y.

Apis Dorsata and Other Things.

BY W. R. MORRISON.

Apis Dorsata has had a hard time of it lately, according some authorities, but I take little stock in "sich." Prof. Cheshire's arguments have chiefly been relied on to give support to specious pleas. Now nothing can be more fallacious than Cheshire's reasoning on this subject. He must have hurried himself when writing on the races, otherwise I can't see how he came to write it. Here is the obnoxious paragraph:

"Flowers and bees have been constantly interacting. The build of every floret is adapted to its fertilizer, and, could we suddenly increase the dimensions of our hive-bees we should throw them out of harmony with the floral world around them, decrease their utility by reducing the number of plants they could fertilize, and diminish equally their value as honey-gatherers. Mechanics, physiology, economics, and botany, alike show any craving after mere size to be difficult to find an excuse."

As there are 212 species of bees inhabiting the British Isles, the readers of the Bee Journal can form their own opinion of how much violence the introduction of one new species would do, and I shudder to think of the terrible havoc that occurred in America when Apis Mellifica was set loose by foolish settlers! American historians have neglected this subject. As to the matter of size, even the British fauna is enriched by the presence of bees much larger (Bombus), and which are more industrious than our own little pet Apis. According to Cheshire, the British farmer ought to abandon his magnificent Shire and Clydesdale horses, and adopt the little donkey or Shetland pony. The work of Bakewell and McCombie is not so easily overturned.

"Bee-Master," too, has "put his foot in it," in making the astounding assertion that the earth has been ransacked, from pole to pole, in search of new bees. Will "Bee-Master" inform an anxious reader who did all the ransacking? If it's so, I

have a bone to pick with the editor of this journal. I would like to know who made the experiments on Apis Dorsata, Nigripennis, Socalis, Dellessertii, Indica, Perrottetii, Lobata and Peronii—all near relatives of our own Mellifica, differing only in size and color. Being somewhat familiar with the Spanish main, I can affirm that his assertion is a misstatement, not warranted in any degree.

South America abounds in honey-gathering bees, some of which have been partially domesticated and more might be. Not since the days of Azara Hall, St. Hilliare, and Gardner, have we had any information of moment on the bees of Terra Firma. And can "Bee-Master" furnish us with knowledge of the bees of Africa, the southern portion of which is a veritable floral garden? I guess not. Dr. Jamieson, the explorer, and now Commissioner of Matabele Land, and Dr. Brotherston, head of the Niger Co., have, I know, a knowledge of bee-culture, and they would be the last to say that Africa has been ransacked for new races of bees. This fact remains, that in certain portions of the globe bees are kept by natives, that have never been brought under scientific culture, and many races yet remain to experiment on.

For my part, I should be glad to see a smaller bee than Mellifica introduced, such as Indica, or even Florea. The great flower, Melianthus Major, is neglected by European bees, but may we not secure the bees that do feed on it, in its native land?

Dr. Alfred Russell Wallace, who is a good bee-keeper, and the author of that entertaining book, "The Malay Archipelago," gives lucid accounts of Dorsata which should be read by all those interested.

Many will agree with Dr. Miller, when he suggest that those who go after new races try them on their own ground, for it is common-sense.

Hive-Roofs—Both the genial Doctor and Mr. Barnum ask for a better hive-roof. I presume they want a flat one, and here is the recipe: Instead of making it of two pieces, make it of about 16, all glued in a clamp; this will neither shrink, twist nor warp. Marine glue is used and the board covered with zinc. Any kind of wood will do, the more the difference of grains the better.

Swarm-Catcher—I have a new swarm-catcher, viz: Nail two old combs to the end of a bamboo pole, insert in the the cluster, and you can soon fetch them down.

The Oxalis, mentioned in my last, turns out to be a magnificent forage-plant for bees—in fact, nothing like it, for it blooms for months during winter and spring here. Florida and California horticulturists should note this plant, for, if I am not mistaken in it, like Oxalis Dieppe, its succulent leaves may be eaten as a salad, and its bulbs as potatoes. If O. Dieppe is anything like as good a bee-plant as this, it should be introduced into the United States forthwith. The French cultivate this plant extensively. Altogether, the bee-men should not overlook the bulb industry; it goes well with bees.

The Bermuda Islands—Some readers have written me in regard to these islands as a place of abode.

I will say, first, if any want to buy bulbs, Uncle Sam's money or stamps pass current.

Second, the only book of value on Bermuda is published by the Smithsonian Institution, Washington, D. C.

Third, there is no authority to get information from here.

Fourth, there are no horticulturists on this group.

Fifth, dates, lemons, oranges, limes, guavas, grow here, and so do strawberries; they last all year, except in the summer season.

Sixth, steamers go from here to New York, Halifax, London, and all the West Indies.

Seventh, don't come here if you have comsumption. It's all right for catarrh, rheumatism, sore throat, and worn-out people who need a rest.

Ninth, this is not the West Indies.

Tenth, the seeds I want are only for honey-plants, and should be from the far West or the Southern States. The bulbs will soon be ready.

Devonshire, Bermuda Isles, July 2.

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

Carniolan Bees—A Few Kinks.

AUGUST BARTZ.

On page 449, appears a letter from Geo. I. Wolf, in which he says that those Carniolan bees he bought of Frank Benton, while he was in Upper Carniola, did not gather any honey, and that the colonies were full of bees. Now that tallies exactly with my own experience,

I bought a queen from a Southern breeder last summer; introduced her in a strong colony, wintered them all right, and they cast a big swarm a few days ago. The bees are gentle and well marked, but I keep bees for the honey they gather and not for looks or name. Several of my best colonies gathered 75 pounds of comb honey each to date, and the poorest 28 pounds, but those gentle Carniolans have not an ounce to spare. I will try to get a few queens of them mismated, and if they do not prove better than their mother, over-board they go.

I expect to get a sting once in a while, and am willing to stand it if I get well paid for it. I have tried many different strains of Italians, and the once much-praised Albinos, but I find that if absolutely pure they are not the bees for comb honey.

A FEW KINKS FROM EXPERIENCE.

If a queen that is to be superseded is allowed to run in the queen-cage intended for the introduction of the new queen, and left there for 10 or 15 minutes, the new queen will be accepted much easier than otherwise.

A colony of bees that has been queenless for 12 to 14 hours, will ball a queen quicker than one that has not been queenless for one minute, especially at a time when the queen is laying.

A colony that intends to swarm soon, will not give up swarming if a young laying queen is introduced, but will insist, and make the young queen lay in queen-cells, even if there is not a cell with brood in the hive. Now, this looks strange, but it is true. About a week ago, I had a swarm to come out, which I hived, but instead of giving them their own queen, I gave them a brand new one, that had just commenced to lay, and then placed the swarm on the stand of a colony that had swarmed a few hours before; but the swarm had gone back again. I thought that this plan would make the one a rousing colony and stop the other one from swarming for awhile, which it did, but right here something new to me happened, for that rousing big swarm would not work as I had expected, so on the third day I opened the hive to see what was the matter with that big swarm. Of course I expected to find the queen laying in good condition, but in this I was mistaken, for not an egg was to be found. But what is that? A ball of bees, on the lower edge of the comb; not a big ball as is usually the case in the balling of a queen, but a loose bunch of bees that would just hold the queen to that spot. They did not sting at her, but would bite and pull, and feed her at the time, and right there on that same place was one queen-cell cup with an egg in it, and that was the only egg or brood of any kind in the hive. How did that egg get into that cell, or where did it come from, if the queen in the ball did not put it there? And if she did put that one egg in that queen-cell, why did she not lay in worker-comb, as such young queens always do? If somebody can explain this thing, please let us hear it through the American Bee Journal.

Chippewa Falls, Wis., July 22.

Another Method of Wintering Bees Described.

BY H. J. LANG.

As the time is here for placing bees into winter quarters, and as I had promised to make my method of wintering known, I will give it.

I have wintered bees successfully for the past six winters, without any loss whatever. In the first place, I select a suitable spot, as close as I can to my apiary—clay land, if possible, as this kind of soil will not cave in. I dig a ditch 3½ feet deep, three feet wide, and as long as is neccessary, according to the number of colonies to be placed in it. I put mine in two tiers high.

After the ditch is dug, and cleaned out nicely, I scatter a few dried forest leaves in the bottom of it, then take two six-inch fence-boards put on each side of ditch, with a brick underneath every four feet. This keeps the first tier of hives from the ground. Then I take the bottom-boards from the hives and place the colonies close together in the ditch.

Some one will ask how I cover the ditch. I will explain as clearly as I can. I get some 2x4's, also sheeting-boards, then make a roof just as I would for a house,

about the same pitch. Let the tie pieces on the bottom project out six inches on each side; make the rafters quite close together, and tie every rafter with a cross-piece, as stated above. Ten feet is the length to be convenient in handling. Then close up the end tight, of every other one. In other words, make one end of every roof tight, and the other open, so that when No. 1 is placed in the ditch, the joining end of No. 2 can rest on top of No. 1, where there are two or more desired, and so on.

You will then place the cover on the ditch, and put the dirt to be placed on this roof from six to nine inches deep, perfectly air-tight. If this is done correctly, I will assure you that the bees will come out next spring in a nice condition, dry, clean, and healthy. But be sure to remove the bottom-boards from the hives before putting away.

If two tiers are placed, put two blocks of wood—I use stove-wood—on the lower hive. This gives the second hive a space for all dead bees to drop away.

If there is anything in this that cannot be exactly understood, I will be only too glad to answer by letter or through the Bee Journal. Monticello, Iowa.

Canadian Beedom.

Some Toronto Convention Folks.

The Toronto convention is a thing of the past, and my anticipations have been partially realized. I am sorry to say I met with some disappointment. The first and greatest was, that a number of our United States brethren whom I expected would be present, were conspicuous by their absence—notably Dr. Miller. But, nevertheless, it was a great pleasure to me to sit in that convention hall and recognize the faces of those United States bee-keepers whose writings I have devoured with great relish during the past five years; and I would remark to a friend who was sitting at my side (who is so unfortunate as not to be a reader of the American Bee Journal, and therefore not so familiar with the faces as they appeared therein from time to time): "There comes York. There comes Newman. There comes Doolittle, and here Dr. Mason," etc.; and any one could have observed a broad smile covering all my face, and perhaps running over my head and half way down my back.

Now, while I have always thought that those Yankee bee-keepers were a jolly, sociable and good-hearted lot of men (and in meeting them personally my conceptions have been fully realized in that respect), yet I have some fault to find in them; and I have met them personally, and "sized up" their stature and avoirdupois. I am not afraid to say so, because, excepting Doolittle and Dr. Mason, they are only little fellows like myself; and, more than that, by this time we are from 200 to 500 miles apart, and I feel quite safe in saying, in the first place, that if Mr. Root and I ever meet in convention again, which I hope we shall, and he persists in sticking to his corner, and (like myself) never open his mouth until he is compelled to, I shall move that the association call in a policeman, take him by the north ear, and make him (root) out. In all other respects I like Bro. Root, for I am sure what he did say was all right, and what he didn't say—well, I will leave some one else to say what that might have been like.

Now, Bro. York, what shall I say about you? In the first place, you just step behind the curtain while I say you're just my height and weight, and within a few days of my age; and I think pretty nearly as good looking, and therefore I rather like you. I hope that *we* (I mean you and I) will be permitted to meet again.

Now, there is Bro. Newman—well, what a great, big man, done up in a very small parcel. Who would ever expect to hear such oratory from so small a physique—and lest Mr. Newman should develop the "big head"—a thing which would be out of proportion to his otherwise make-up, except in speech and good-nature—I will merely say that his address was simply admirable.

I next come to a trio of apicultural lights, in the persons of Father Langstroth, Dr. Mason and G. M. Doomuch, and I do not feel myself equal to the occasion, so I will simply say that in my opinion no bee-keeper, or any one else, could fail to be happy while in the presence of those three men.

There are a whole lot of nice things which I would like to say about more of our United States brethren, but I am afraid they might see it in print, and feel ashamed of it, so I will only say that I never enjoyed myself more in any gathering than I did at the North American convention, in Toronto.

I was a little disappointed in learning that the power of selecting the next place of meeting had been delegated to the Executive Committee, for I had fully intended, when that came up for discussion, to move that the young "upstart" from Nebraska, whom I expected would be there with a bag wherein to dump the convention, be ejected, bag and baggage; for you know we Canadians wanted the convention in Toronto again. But all our plans failed because we never had an opportunity to manifest our desires.

I have said nothing about the Canadian bee-keepers, and lest some Yankee might think that we have no distinguished bee-keepers in Canada, I want to say right here that we have just as good men as you have, Mr. Yankee, but I must admit that some of the Canuck brethren have not learned to conduct themselves so admirably in convention as Uncle Sam's boys.

Now, lest some one will "down me" with an apicultural club, I will stop right here. D. W. Heise.

Bethesda, Ont.

The Honey-Sac.

There is hardly anything in nature more complicated and indicative of creative wisdom than the internal economy of the honey-bee. Microscopic disclosures of the organs and functions of this wonderful little insect, form an endless field for study. It has been truly said, "an undevout astronomer is mad," and surely the same is true of the undevout bee-keeper. The evidences of design and adaptation are innumerable. These imply a designer—an adapting mind.

In no part of the construction of the bee is this more evident than in the honey-sac. An examination of its construction and functions will show, if one may so speak, that extra pains and care have been bestowed on this organ. The question arises, Why all this skillfully contrived mechanism, if, as some contend, the honey-sac is only a receptacle? So far from this being the case, it is in reality a laboratory in which important chemical changes take place in regard to nectar Nectar, when first gathered, is not honey. Its cane-sugar must be acted on by certain glandular secretions furnished in the honey-sac, by means of which it is changed into grape-sugar. No sooner does a drop of nectar pass into the honey-sac than a pumping system is put in operation by means of which the saliva is mixed with the nectar, and the chemical change just spoken of effected. This done, at the will of the bee, the honey thus produced, is either passed on into the digestive apparatus, or regurgitated, and stored in the comb-cells. Regurgitation is provided for by very strong muscles, and passage to the digestive organs takes place through a most ingeniously contrived stomach-mouth.

The honey-sac would seem to have at least two uses—that of a store-house and a compounding vessel. How thoroughly the latter work is done may be gathered from the fact that the honey-sac only holds about one-third of an ordinary drop. To transmute this small quantity of nectar takes but little of the glandular secretion, whatever it may be. Some have supposed, so high an authority as Prof. Cook among the number, that the process of digestion, partially or wholly, takes place in the honey-sac. but, in reality, the process of digestion does not truly begin until the next chamber—the chyle-stomach—is reached. If, as some think, the honey-sac is only a food-bag similar to the "crop" of birds, why all the expenditure of pains and skill upon it, which has just been referred to?

There is in nature no waste, none of man's ridiculous display of skill for no apparant object but the ostentation of it. Everything has some object, hidden or apparent. That of the secretory organs of the honey-sac is obviously the transmutation of nectar into honey, after which it is ready for immediate use as food, or for storage in the comb-cells for future consumption.

These observations are suggested by Dr. Brown's "Bee-Talk" on page 542.

The Alsike Clover Leaflet consists of 2 pages, with illustrations, showing the value of Alsike clover, and telling how to grow it. This Leaflet is just the thing to hand to every farmer in your neighborhood. Send to the Bee Journal office for a quantity of them, and see that they are distributed where they will do the most good. Prices, postpaid, are as follows: 50 for 25 cents; 100 for 40 cents; or 200 for 70 cents.

Now is the Time to work for new subscribers. Why not take advantage of the offers made on page 658?

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Prevention of Sugar Syrup Granulation.

What do you put in sugar syrup to prevent granulation?
A. B.

ANSWER.—Nothing. Formerly I put an even teaspoonful of tartaric acid to 20 pounds of syrup. Now I feed early, using equal quantities of sugar and cold water, and the bees fix it up all right.

Feeding for Winter—Uncapped Syrup Stores.

I have 33 colonies of bees, and they are a complete failure here this year. I have not had a swarm and only one pound of honey, and that was not capped over. I will have to feed them.

1. How will it do to take out part of the brood-frames—say all but five—and put in the division-board and give them syrup until the five frames are capped?

2. Will it do if the syrup is not capped over? J.M. T.

Valley Head, W. Va. Sept. 24.

ANSWERS.—1. It may do all right if the colonies are not too strong to stand so much crowding, but if very strong there is no law against leaving them more than five frames.

2. Not so well. Still they may get along all right with a good deal of uncapped stores.

What About Alfalfa for Honey in the East?

I have seen quite a number of short paragraphs in the bee-papers of late (and from you, among others) to the effect that alfalfa is turning out to be a good hay crop much farther east than was supposed, but I have not seen anything about bees working it *when grown in the East*. How about this? Do bees work it in the East? H. P.

Ben Avon, Pa.

ANSWER.—A very pertinent question, and I don't know the answer. I never saw a field in bloom but once, and then for a short time, and I didn't see a bee on it, and I don't remember seeing any statement that bees worked on it as far east as Illinois. For all that, they may do so, and I'd like to see reports from those who have had experience.

Top Hive-Ventilation in Winter.

Since my letter of the 21st I have thought of something more I wish to say. I saw in one of the copies of the Bee-Journal that a man speaks of top ventilation for hives in winter, by boring an inch hole in the top-super, and covering with wire-netting. I have been bothered some by the vapor freezing in the form of icicles. Will top ventilation prevent this?

Clyde, N. Y. C. A. B.

ANSWER.—If there is enough ventilation at the top so the vapor can all pass out, then it will not of course form in icicles. Or if there is no upward ventilation, and abundance of lower ventilation, the same thing will be accomplished by the vapor passing out at the entrance. But if the hive is closed at the top and very nearly closed at the bottom, then the moisture that is constantly exhaling from the bees will settle upon the inside walls in the form of ice whenever the weather is cold enough.

Letting Bees Out on Shares.

I would like to put out about 25 colonies of bees on shares. What is the proper rule? Will I have to furnish all the new hives? and to whom will the ones belong that I furnish? What share am I to give if the one that takes them does all the work? or what share am I to get? G. A. H.

ANSWER.—There's no fixed rule about bees on shares. The main thing is to have a very clear and definite understanding in advance, and then get it down in writing so there can be no misunderstanding afterward. No matter if it's the best friend you have in the world, there's always danger of misunderstanding. Perhaps something like this is customary: Suppose you have 10 colonies put out on shares: they increase to 18, and give 500 pounds of honey. You will furnish all needed supers—as sections and hives—and in the fall you will have 14 colonies and 250 pounds of honey. That is, you have the original 10 hives and half the increase, and half the honey.

Wintering Nuclei without Uniting Them.

I have four nuclei that cover about three or four frames. Do you think I can bring these through the winter without uniting? I would like to do so on account of the queens. They are in 8-frame dove-tail hives. I thought I would bring them to the center of the hive and put a chaff cushion on each side of them, and an outer-case packed with sawdust. I want your opinion on the matter. D. P. R.

Francisco, Ind., Sept. 30.

ANSWER.—Very likely it will be safer to sacrifice a queen now than to run the risk of losing both. Still, if you have mild winters or a good cellar you may come out all right without uniting. Here's a certain sort of uniting you can practice without losing either queen. Put a dividing wall in the middle of your hive not more than ¼ or ⅜ inch thick, and be sure it is bee-tight so that no bee can pass through. Now put a nucleus in one side and another in the other. They'll winter as well as though all together—at least they have done so a number of times for me.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Do not Experiment.—"I learned that it is best in bee-keeping, as well as in other things, to experiment always on a small scale."—J. J. Hardy, in Gleanings.

This is a very good idea, and in many cases it is best not to do any experimenting at all. Here is where many beginners fail, for just as soon as they get a smattering of knowledge about bees, and become the proud possessors of a few colonies, they go to trying all kinds of experiments, and it is hardly necessary for me to say that they fail in most of them. If one feels he must experiment, it is better to have one colony to "fool with," and then let the rest gather honey to pay the bills. For my part, however, I am content to let the other fellow do most of the experimenting.

Cold and Bees.—"At one time I had an idea that it was necessary to have hives with double walls, and filled between with charcoal or saw-dust, but by experience I found that the hives thus constructed did not do well. Cold does not kill bees when in mass. In my opinion the thickness of the hive-walls is non-essential."—Rev. L. L. Langstroth, as given in the report of the first bee-keepers' convention held in America, March 15, 1860.

I am glad to find so eminent an authority agreeing with my oft-repeated statement, that bees in a cluster do not *freeze*, they *starve*. I do not know what views this venerable authority in apiculture held lately on this subject, neither did I know until a few days ago that he had expressed the opinion given above, but I am quite sure that time will demonstrate that this view is correct.

About Lived on Honey.—"I have about lived on honey for the last seven years. Honey cured me of dyspepsia." This is what one of our leading physicians said to me when I drove up to his house for the first time to deliver a 5-pound pail of extracted honey. I thought I was one prescription ahead, and it did not cost me a dollar, either, but it is of no special value to me, as I have eaten honey three times a day for years, when I could get it. As the prescription did not cost me anything, I will give it to the readers of the Bee Journal, as it may be of use to them. I am certain it will be of great advantage to many to eat more honey, and less of other sweets.

A leading lady physician, in giving instructions to nursing mothers as to diet, says: "Honey, too, often proves invaluable. Eat honey with bread and gems, instead of the carbonaceous butter. It stimulates all of the secretions."

The American Bee Journal
ESTABLISHED IN 1861
OLDEST BEE-PAPER IN AMERICA

George W. York, - - Editor.

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Editorial Budget.

Insuring Bees.—A subscriber in California wants to know if there are any fire insurance companies that insure apiaries. Who knows? And what are the names of the companies? Some one who knows, please drop a card to this office giving the desired information.

Mr. S. J. Baldwin, of England, expected to leave for a visit to America, Sept. 26. His address will be 554 Madison Ave., Elizabeth, N. J. Mr. Baldwin is a bee-supply manufacturer, and dealer in honey and beeswax in England. He was over here in 1893, and reported the trip very enjoyable and also greatly beneficial to his health. I trust he may again be much profited by his present stay on this side the "briny deep."

That Essay on Comb Honey, written for the Toronto convention by Mr. B. Taylor, and published on page 614, seems to be appreciated very much, as it justly deserves. Mr. William McEvoy, Ontario's foul-brood inspector, and the new Vice-President of the North American, wrote me thus about it, on Sept. 30:

That essay of B. Taylor's in last week's American Bee Journal, is one of the best ever published, and is the work of a ripe scholar or great expert in bee-keeping.

WM. MCEVOY.

Earn Your Own Subscription.—Any present subscriber can earn his or her own subscription to the American Bee Journal for one year by sending *three new subscribers*, with $3.00. A copy of "Bees and Honey" will also be mailed to each new subscriber, and the Bee Journal will be sent to the new readers from the time the order is received up to the end of 1896. This is an easy way to earn your own subscription and at the same time help to circulate the Bee Journal. Remember, getting 3 new subscribers pays for your own subscription for 1 year! Of course, no other premium will be sent in addition. This is a straight offer by itself.

Selling Other Bee-Keepers' Honey.—On page 675 is a query whether it would be right for a bee-keeper to buy honey and retail it as his own production among his customers after his own crop is disposed of.

Of course, any one knows it would be very wrong to say that certain honey is from your own apiary, produced by your own bees, when you know there isn't a word of truth in it. I am sure no sane bee-keeper wants to do that. But surely there can be nothing wrong in any bee-keeper selling the honey produced by another, when he *knows* such honey is good and *absolutely pure*.

For instance: Suppose I had sold all my crop of extracted honey to my local customers and did not have enough to go half way around. I label it all, "Put up by Geo. W. York." Then I send for a ton of extracted honey to Dr. Miller (of course he hasn't any, but to change the monotony we'll suppose he has some); he ships it to me, and I put it up and label it the same as I did my own crop and sell it. Would there be anything wrong in that? Most assuredly not.

Of course, if I were asked whether *I* produced the latter honey, I should say: "No; but *I* guarantee its purity." That should satisfy any sensible customer, and I believe no further questions would be asked.

My advice would be, to retail all your own crop of honey yourself, if possible, and just as much more as you can, being *sure* that what you buy elsewhere is pure and good. Never be guilty of offering any honey that is not "straight goods," whether it be your own production or not.

Again, I say, *sell all your honey*. Then sell some more.

"Poor Seasons for honey are school seasons for bee-keepers. He is the best scholar who soonest learns to profit most by his losses."—American Bee Journal for May, 1867.

A Fine Photograph of the nice apiary and home of Mr. Henry Sutherland, of Bainbridge, Mich., has been sent me by the owner. I can see therein about 20 hives. Mr. S. and family are also shown. It has every appearance of being a pleasant home and neatly-arranged apiary.

The Names and Addresses of all your bee-friends, who are not now taking the Bee Journal, are wanted at this office. Send them in, please, when sample copies will be mailed to them. Then you can secure their subscriptions, and earn some of the premiums offered on page 658. The next few months will be just the time to easily get new subscribers. Try it earnestly, at least.

Diphtheria—that heartless destroyer—has recently claimed three of the dear children of Mr. Wm. Russell, of Minnehaha Falls, Minn., and a fourth was almost despaired of on Oct. 5. This is very sad, and all will sympathize with our brother and family in their affliction.

Mr. Russell writes that by reason of the diphtheria being at his home, he understands the city authorities will condemn his entire honey crop. As honey-production is the only means Mr. R. and family have of making a living, it is sincerely to be hoped that they will be treated justly as to compensation. Surely the one affliction is enough, without being compelled to lose the honey besides.

Apicultural Experiment Stations.—On page 662 of this number is published the excellent essay written by Hon. R. L. Taylor, of the Michigan apiarian experiment station, for the Toronto convention. He certainly offers some very good suggestions, most of which, no doubt, will be taken advantage of sooner or later. The one which interests me most is his reference to the bee-papers not co-operating in the work as they should. I don't know what more the Bee Journal can do than it has done. I don't think he should blame it for publishing his (Mr. Taylor's) reports second-handed, when he saw fit to furnish them to one bee-paper only. As I said at the convention, if Mr. Taylor would send letter-press copies of his monthly reports to all the bee-papers, I am sure all would be glad to publish them. This would be but little extra work

for him, and would give the results of his experiments a much wider and more prompt reading. I think I am safe in saying that as soon as Mr. Taylor shows a little more willingness to co-operate with the bee-papers, they will do their part in reciprocating, and with compound interest. But so long as the Michigan experiment apiary continues to give just cause for thinking it only a local or State affair, I do not think it should be thought surprising when the general bee-keeping public takes no great interest in it.

There is another reason, I think, why bee-keepers have appeared not to be deeply interested in Mr. Taylor's work. Some of the results of his experiments have been given in such a concentrated, tabulated form that only an expert accountant, mathematician, or politician, could ever comprehend them. Life is too short, and too "real" and "earnest" with most bee-keepers, to spend it in a vain effort to understand anything very definite from several pages of cold figures. What is wanted, I think, is a plain description of the experiments undertaken, and then as clear a statement of the results, disfiguring it with as *few* tables of figures as possible.

I want to say that I always read Mr. Taylor's reports with much interest and profit, and, as I have often said, I think he is the right man in the right place. But if he'll come down among us common folks a little more when talking to us about his experiments, I think he'll discover a good deal more sympathy and interest than he now imagines exists.

Mr. H. M. Pace, of Kentucky, has sent me a photograph of his bee-yard. He started the summer of 1894 with 6 colonies, and now has 46, all thrifty for winter quarters.

Building a Business.—If you, or any one you may know, wish to build a little business all your own right where you are, send to the Bee Journal office a stamped and self-addressed envelope.

Lorenzo Lorraine Langstroth.

As noticed briefly in last week's issue of the American, Bee Journal, there passed to The Beyond, on Sunday, Oct. 6, 1895, America's grandest and noblest apiarian benefactor—Rev. L. L. Langstroth. Before such a sublime character, how inadequate seems my pen to do him justice. In fact, I am not equal to the task—who is?—so I take the liberty to extract from the "A B C of Bee-Culture," a short biographical sketch of Father Langstroth, written a few years ago by Dr. C. C. Miller, who knew him well, at least by years of honorable reputation and much correspondence. It reads as follows:

Lorenzo Lorraine Langstroth was born in Philadelphia, Pa., Dec. 25, 1810. He graduated at Yale College in 1831, in which college he was tutor of mathematics from 1834 to 1836. After his graduation he pursued a theological course of study, and in May, 1836, became pastor of the Second Congregational church, in Andover, Mass., which position ill-health compelled him to resign in 1838. He was principal of the Abbott Female Academy in Andover in 1838-'9, and in 1839 removed to Greenfield, Mass., where he was principal of the High School for Young Ladies, from 1839 to 1844. In 1844 he became pastor of the Second Congregational church in Greenfield; and after four years of labor here, ill-health compelled his resignation. In 1845 he removed to Philadelphia, where he was principal of a school for young ladies from 1848 to 1852. In 1852 he returned to Greenfield; removed to Oxford, Ohio, in 1858, and to Dayton, Ohio, in 1887.

At an early age the boy Lorenzo showed a fondness for the study of insect life; but "idle habits" in that direction were not encouraged by his matter-of-fact parents. In 1838 he began his real interest in the honey-bee, when he purchased two colonies. No such help existed then as now, the first bee-journal in America being issued more than twenty years later, and Mr. Langstroth at that time had never seen or heard of a book on bee-culture; but, before the second year of his bee-keeping, he did meet with one, the author of which doubted the existence of a queen! But the study of bees fascinated him, and gave him the needed outdoor recreation while engaged in literary pursuits, and in the course of time he became possessed with the idea that it might be possible to so construct a hive that its contents in every part might be *easily* examined. He tried what had been invented in this direction, bars, slats, and the "leaf-hive," of Huber's. None of these, however, were satisfactory, and at length he conceived the idea of surrounding each comb with a frame of wood entirely detached from the walls of the hive, leaving at all parts, except the point of support, space enough between the frame and the hive for the passage of the bees. In 1852 the invention of the movable-comb hive was completed, and the hive was patented Oct. 5 of that year.

It is well known, that, among the very many hives in use, no other make is more popular than the Langstroth; but it may not be so well known that, in a very important sense, every hive in use among intelligent bee-keepers is a Langstroth; that is, it contains the most important features of the Langstroth—the movable comb. Those who have entered the field of apiculture within a few years may faintly imagine, but can hardly realize, what bee-keeping would be to-day, if,

Rev. L. L. Langstroth, Dayton, Ohio, at 80 Years.

throughout the world, in every bee-hive, the combs should suddenly become immovable, fixed, never again to be taken out of the hive, only as they were broken or cut out. Yet exactly that condition of affairs existed through all the centuries of bee-keeping up to the time when, to take out every comb and return again to the hive without injury to the colony, was made possible by the inventive genius of Mr. Langstroth. It is no small compliment to the far-seeing inventive powers of Mr. Langstroth, that, although frames of different sizes have been devised and tried, and improvements, so-called, upon his hive have been made by the hundred, yet to-day no other size of frame is more popular than that settled upon by him, and, in general, the so-called improvements are one after another dropped into oblivion, and thousands of hives are to-day in use among the best bee-keepers, scarcely varying, if varying at all, from the Langstroth hive as first sent out.

As a writer Mr. Langstroth takes a high place. "Langstroth on the Hive and Honey-Bee," published in May, 1853, is considered a classic; and any contribution from the pen of its author to the columns of the bee-journals is read with eagerness. Instead of amassing the fortune one would think he so richly deserves, Mr. Langstroth is to-day not worth a dollar. He sowed, others reaped. At the date of his invention he had 20 colonies of bees, and never exceeded 125.

In August, 1836, Mr. Langstroth was married to Miss Anna M. Tucker, who died in Jan., 1873. He has had three children. The oldest, a son, died of consumption contracted in the army. Two daughters still survive.

Since his twentieth year, Mr. Langstroth has suffered

from attacks of "head trouble," of a strange and distressing character. During these attacks, which have lasted from six months to more than a year (in one case two years), he is unable to write or even converse, and he views with aversion any reference to these subjects which particularly delight him at other times. Mr. Langstroth is a man of fine presence, simple and unostentatious in manner, cheerful, courteous and a charming conversationalist.

In reply to a question, he writes, under date of March 26, 1888: "I am now a minister in the Presbyterian church. Although not a settled pastor, I preach occasionally, and delight in nothing so much as the Christian work. My parents were members of Mr. Barnes' church, in Philadelphia, the mother Presbyterian church in the United States."

C. C. MILLER.

A short account of my own meeting with Father Langstroth at the recent Toronto convention, I gave on page 620. It was the only time I ever saw him. How glad I am now that I went to Toronto! To meet him was worth all it cost, and more. There were many things he and I talked about during that memorable three-hours' visit I had with him in the hotel parlor. How he unfolded to me the history of the apicultural past—particularly regarding his great invention, popularly known as the "Langstroth hive"—and the prodigious injustice and gigantic wrong done him by those who are now, I believe, mainly "out of the bee-business," and who can never, here or hereafter, undo their wickedness. But the great Father Langstroth, in the depth of his kind and forgiving heart, bore no ill-will, spoke no uncharitable word.

But I must not at this time dwell upon the magnificence of his character, nor the spotless purity of his life, though I feel that golden-tongued poet never uttered apter words of any man than these, which apply with such peculiar force and truthfulness to our beloved Father Langstroth—

"None knew him but to love him,
None named him but to praise."

Naming Honey-Plants.—A good many have lately sent me specimens of various honey-plants to be named, requesting that the names be published in the Bee Journal. Now, as it is of no benefit to any one, except the one sending the plant, to publish the name, hereafter please do not ask that space be given for what is of so little general interest.

Another thing: I am no botanist, and whenever I receive plants I must forward them to some one who is able to name them. Prof. T. J. Burrill, of the Illinois State University, at Champaign, Ill., has kindly helped me so far, and doubtless is willing to continue so to do. But why not mail the plant specimens direct to him, enclosing a self-addressed and stamped envelope in which he can return the reply? I am sure this arrangement will be more satisfactory, as you will be certain to get very prompt answers.

One Dollar a Year is a "dirt cheap" price for a weekly like the American Bee Journal. I think everybody who is at all familiar with it admits that statement. Comparing it with the price of almost every other bee-periodical of to-day, it should be $2.00 a year. Granting that, each subscriber will readily see that the Bee Journal publishers are saving him or her just $1.00 a year. Now, in return for that, why not each reader resolve that each year he or she will procure at least one new subscriber for the Bee Journal? Surely each could do that, at least for a few years. Besides furnishing a low-priced paper, the publishers are willing to pay liberally for the work of getting new subscribers. As an evidence of such fact, see page 658 of last number.

The American Bee Journal is trying all the time to work for *your* interest. Why not you try to work for *its* interest? That is a mutual affair that ought to be self-commendable.

☞ See "Bee-Keeper's Guide" offer on page 673.

Among the Bee-Papers

Gleaned by Dr. Miller.

OUR LATEST PERCOLATOR FEEDER.

We are now using with great satisfaction, cleated boards with a three-inch auger-hole in the center, in place of the plates. The crocks are filled half and half, as previously explained: the flannel or cheese-cloth is then laid over, after which the cleated boards with the orifice in the center. The whole is reversed, and the percolated syrup is taken by the bees at the opening in the center of the board now under the crock. We prefer this arrangement because the bees take the feed faster.—Gleanings editorial.

KEEPING EXTRACTED HONEY IN LIQUID FORM.

Good extracted honey, if brought to a temperature of not over 180° Fahrenheit, bottled and sealed *while hot*, will usually, if kept in a uniformly warm temperature, keep liquid for a year or more. Indeed, we had some fine clover honey, treated in this way, keep liquid for two years. But there is a great difference in honey. Some will candy much quicker than others. The riper—that is, thicker—the honey is, the longer it will keep liquid.

Cold atmosphere is quite favorable to candying of both extracted and comb.

The temperature of the storage-room should be about that of a living-room—70°. Higher would do no harm, but is inconvenient and expensive.

Cellars and cold rooms, especially when subject to freezing, are poor places for honey.

In melting candied extracted honey, the temperature should not go above 180°, otherwise the fine flavor will in a large measure be destroyed. The usual way is, to place the vessel of candied honey in another larger receptacle containing hot water.—Gleanings.

SOME STRAY STRAWS FROM GLEANINGS.

Sections that are extracted, to be used another year, must be cleaned out *by the bees*, or your sections will be likely to contain candied honey.

Australians are giving attention to the question whether it may not be feasible and profitable to manage so as to increase the production of wax.

One advantage of using percolating feeders, or the crock-and-plate method, is that robbers don't trouble as they do when you use syrup. When you pour in the sugar, robbers don't care for dry sugar. When you pour in the water, it stays on top, and robbers don't hanker after cold water. [Yes, and that advantage is a big one in a beginner's case.—Ed.]

If the interest among bee-keepers continues in such forage-plants as crimson clover, sweet clover, alfalfa, lathyrus sylvestris, etc., the table will be turned; and instead of agricultural journals with a bee-department there will be bee-journals with an agricultural department.

WHERE BEES DO PRETTY WELL.

We usually advise bee-keepers to stay where they are. Bees do pretty well in almost any locality in the United States. California (at least the southern part of it) stands at the head; then comes Colorado, Arizona, Florida, New York, and Pennsylvania. But certain portions of the States named are barren of honey.—Gleanings.

WILL QUEENS KEEP GOING BACK AND FORTH FROM ONE STORY TO ANOTHER?

The question came up whether my queens would go from one story to the other with my new frames having top and bottom bars each 1⅛ inches wide, having respectively a thickness of ⅞ and ¼, thus making, with the ¼ inch between them, a space of 1⅜ inches without any comb, across which the queen must pass to get from one story to another. To give the matter a pretty full test, I put seven colonies on these frames in two stories. The combs were new, the colonies not overly strong, and there was no likelihood that in any case they would occupy more than eight combs. So I put four combs in the upper story and four combs in the lower story, leaving the queen in the upper story. If I found eggs in the lower story after four or more days, then I would know to a certainty that the queen had gone below.

One colony was so weak that the queen could occupy only

about three frames; and as these were all in the upper story it was not strange she did not go below. Another remained in the upper story without going below, and I feel pretty sure she would have occupied more combs if they had all been in the upper story. As to the rest, however, the queens seemed to occupy one story as well as the other, altogether against my expectation. For instance, Aug. 22 I found, in No. 36, eggs in both stories. That shows clearly that, during the week of Aug. 19—26, the queen must have made at least three changes from one story to the other. So I feel pretty sure that, as a rule, the queen will occupy two stories about as well as one, if the room in one story is not sufficient.—Dr. Miller, in Gleanings.

ONE OR TWO STORIES FOR BROOD-CHAMBERS.

And now comes in the point Dr. Miller and I do not agree upon. I very much object to tiering up. Lifting off and on upper stories is too hard work. I very much prefer having all my frames in one story. He rather favors holding on to the 8-frame size, and giving extra stories when needed. I think that would be a good plan, too, as our queens go readily from one story to the other, even if it were not for the great amount of hard lifting that is involved in it. Just think a minute about it. For every colony that is examined, that upper story has to be lifted off and then lifted back again, and the upper story is always the heavier one. After you have lifted off and on upper stories all day, you begin to think there is not much enjoyment in bee-keeping.

Another point in favor of one story is, I think, I can find queens a little quicker with one story than with two. With two stories she has a little more chance to get out of your way. —Emma Wilson, in Gleanings.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

Cotton Honey.

My friend, J. J. Keith, on page 576, thinks I must be mistaken in observing that cotton-bloom yields honey some seasons, from the fact that he has never discovered any in an experience of 18 years. While he has not been able to detect any, other bee-keepers have. A few years ago a friend living in a great cotton-belt in South Carolina, found his bees storing large quanties of surplus at a time when there was no other bloom within reach of his bees except cotton. He saw them working on the bloom,

Placing Feed in the Combs.

I have tried an experiment that seems to me to be good. That is, to feed a weak colony of bees, I simply take out a frame that contained nothing—which is easily found in a hive in bad condition; brush the bees off, then hold it over the table on a plate, and pour into the cells some sugar syrup, such as we use in a feeder. Turn it over and fill the other side likewise. Then I place the frames in the hive in such a position away from the balance of the comb, to the other side of the hive. As the sun goes down I place it in the hive. I find that by the next sunset the bees have carried all out into the other combs. Now, my questions are:

1. Have you ever tried it?
2. Should the bees not move this syrup, would it not be as good for them as if they had? MRS. E. O. SWAFFORD.

Rosebud, Tex., Sept. 23.

ANSWERS.—1. Yes.

2. It would be as good, unless it should ferment.

Laying-Worker Experience, Etc.

Three years ago I commenced with one colony of black bees, and now I have 22 colonies. Some of them are as nice Italians as can be had in this country, and I have not lost a single colony. Last spring when I examined my bees, I found that one colony was queenless, and had laying workers in it. I gave them brood and eggs, and thought they would rear a queen, but to my surprise they would not. So the next thing to do was something else, and I thought I would experiment a little, so I commenced. I took the upper story from the laying worker's hive, spread a newspaper on a single hive, and set the upper story on the other stand. I made a hole in the center large enough for the bees to pass through, and in 24 hours the bees were all at work and seemed to be all right. I used the lower story box the same way as the first, and each swarmed in a short time. So that ended the trouble with the laying workers. Now I have four colonies from three, and they are in good condition, but the honey crop in this section of the country has been very poor this year.

There are some bee-men in this county, and if some would talk up the bee-business it would become a paying business. The industry has never had much encouragement here. If men would take the pains in the culture of bees that they do in the culture of cotton, there would not be so much cry of hard times. A. M. BARFIELD.

Stone Point, Tex., Aug. 25.

Young Bees Webbed in the Cells.

DR. BROWN.—Last year I bought 40 colonies of bees, mostly all black, in boxes of different shapes and dimensions. I transferred them into 10-frame Langstroth hives last spring. Last month I reared some Italian queens, and the young bees of two of them cannot get out of the cells, and the workers cut the combs (I suppose) to let the young bees out. I send you a few of the bees in question. Can you tell me what is the matter with those bees? The honey they are storing now is very strong or rancid. Do you think it will be good when ripe? From what kind of plant are they gathering that honey? Nearly all the hives are full of honey now.

Richmond, Tex., Sept. 6. J. BAUDAT.

ANSWERS.—The reason your young bees can not get out of the cells, they are webbed fast by the larvæ of the wax-moth. The worms have spun webs under them. Your better plan is to take a pen-knife and dig them out, and dislodge the worms, and give the bees a chance to place the combs in a clean condition. Clean out the bottom-boards of those colonies. The honey, I think, is all right. I know nothing of its source.

The Bee-Martin or Kingbird.

Since writing my article on page 553, I have been trying the merits of the kingbird for the table. My son killed 17 yesterday, and most of them are loaded with fat. I can assure you that at this season of the year they are splendid eating. I have just been eating them. They are gathering now into flocks preparatory to their regular fall migration, and may be killed in great numbers. I think that they are fully equal to any bird I have ever tasted for delicacy of flavor. Now is the time for bee-keepers to "get even," if they want to kill the kingbird.

I still adhere to the views in my former article, and think that the bird does more good than harm. T. S. FORD.

Columbia, Miss., Sept. 14.

Favors a Square Hive.

As there is a great deal of talk about what is the best hive, I will give my idea. First, all that I have seen of them there is no argument in favor of the larger hives, for this locality. Of course, where it is one perpetual honey-flow they might be exactly right. I think our 20-inch frame and hive is out of shape, and too long to handle. A square hive, 14 inches square, and 10 inches deep is just right with loose bottom and top. If this size were adopted there would soon be no more moth talk, and always plenty of surplus honey. I have fifty colonies of German-hybrid and Italian bees, and have plenty of honey.

Last year I found a plant growing wild on Big Black river. I saw that bees and humming-birds had just covered it. I gathered the seed, and sowed it in my bee-lot, and now the bees and humming birds have a paradise. It grows 8 or 10 feet high, and every flower has a drop of the prettiest syrup I ever tasted. No cultivation is necessary, as it excludes all other weeds, and stock will not eat it. The seeds lie in the ground all winter, and come up the next spring.

Benton, Miss., Sept. 11. R. E. MANNING,

General Items.

Well Pleased with the Season.

The honey season is nearly over in our locality. The forepart of the season was very poor. I did not get any white honey to amount to anything, but the fall flow has been splendid. I have taken 418 sections from 10 colonies, of No. 1 honey, that I will sell at a shilling a box. My bees are in a splendid condition for winter, and I am well pleased with the season so far.

Clyde, N. Y., Sept. 21. C. A. BILLINGS.

Bees Did Well This Year.

Bees have done very well this year, and for the last two days they have just been hustling on the asters. W. W. MOUNT.

Farmington, Tenn., Sept. 19.

Dry Season and Light Surplus.

This is my first season with bees. I have four colonies that I bought last spring—three swarms and one old colony. Bees are very scarce here, the season was very dry, and the surplus light. There were very few swarms. IRA CLAPPER.

Monticello, Ind., Sept. 30.

Results of the Past Season.

Now that the honey harvest is over, the honey all taken off the hives, and the bees are ready for that long night which will soon come, I send in my report for this season.

I started last spring with 20 colonies and two nuclei, and closed the season with 36 colonies and 11 nuclei. My surplus amounted to 1,482 pounds of comb honey and 500 pounds of extracted. I fed 75 cents' worth of sugar. My bees are in fine condition.

AUGUST BARTZ.

Chippewa Falls, Wis., Sept. 23.

Small Harvest in British Columbia.

I have been much pleased with my investment in the American Bee Journal, and hope to still see it prosper. I consider it extremely valuable to any person who keeps bees. I have carefully read the various hints and suggestions during the past season, and in many cases they have been helpful to me.

My bees are on the southeast side of one of the coast mountains, on the Gulf of Georgia, Pacific Ocean. This has been a very dry season, and together with brush fires, the honey harvest is very small here.

Vancouver, B. C. R. H. LANGDALE.

Sweet Clover Helped Him Out.

As the editor has asked all readers of the Bee Journal to send in their reports for 1895, I thought I would send mine.

In the fall of 1893 I bought two colonies of black bees in box-hives, wintered them in the cellar, and in the spring of 1894 I got two more colonies of blacks; transferred them to movable 10-frame hives, and had everything ready to reap a big harvest, which I supposed I would get. Well, May and June came and went, but the bees did not get enough to live on. Then I began to ask questions of our good friend, Dr. Miller, to see if he would not have things changed, but it made no difference as to the yield of honey, as I had to feed all my bees. By this time I had increased to 23 colonies. When I found that we could not get any surplus, I began to increase from my four colonies until I had 24. They were all in pretty good condition for winter except three, and they died before spring. I had bought some of the best Italian queens I could get, so last spring what colonies I had were rather light in bees, and

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A. C. BROSIUS, Cochranville, Pa.

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Bee-Keeper's Guide—see page 673.

more so in stores; but by feeding, and taking good care of them, I got 16 colonies in fine trim for the white clover harvest.

White clover looked as fine and as plentiful at this place as I ever saw it, yet the bees paid no attention to it. I began to get tired of this kind of bee-keeping, but when sweet clover began to bloom, I tell you it was fun to watch the bees! Well, from my 16 colonies I got 550 pounds as fine white comb honey as any one would wish to see, and 735 pounds of extracted—all from sweet clover; and I have 24 colonies now. All but two have from one to three supers of the 8 and 10 frame dovetailed hives on top of each colony, and they are all full, but not all capped yet. I do not want to take them off until capped over.

For my part, I think it has been a good season after all; but thanks to sweet clover, for me. L. SYLVESTER.

Aurora, Ill., Sept. 20.

Bees in Kittitas Valley, Washington.

I am an old soldier, 63 years of age. I was born and reared near Mt. Vernon, Ill., and have handled bees in a rude way almost all my life, especially while "marching through Georgia." I have eight colonies now in Simplicity hives. They have done well this season. I bought three colonies the first of August, with only bees and brood-combs. I have to-day taken a full super of 24 sections of comb honey from each colony; the honey is alfalfa, and is nice and white. This valley (Kittitas) is 25 miles in length by 15 wide. All crops are grown by irrigation here. Alfalfa and all sorts of clover do well. We have several species of willow that furnish early bee-pasture. S. W. MAXEY.

Ellensburg, Wash., Sept. 23.

From a California Lady Bee-Keeper.

I saw in last week's Bee Journal an article from California. I would like to get bees for $1.50 per colony. In this locality they ask from $3.00 to $5.00 for a colony in good condition. I bought some bees for $3.00, but they were diseased, although the man I purchased them from said his bees were all healthy. Bee-men are not all saints. There have been considerable foul brood and bee-paralysis among bees in California, but it is kept dark. A man who had some bees came to my place on some business. I asked him about his bees, and he replied: "They got foul breed in um, and I sold um."

I first began in the bee-business in the "year of the war," and although I am old in the business, I never considered myself an advanced bee-keeper until I became acquainted, through the columns of the Bee Journal, with the sages of bee-ology.

I never spent a dollar that has yielded me so much pleasure and profit as the one spent for the American Bee Journal.

I think the low price of honey is caused, in part, by the intoxication of this climate.

ELLEN C. BLAND.

Fernando, Calif., Sept. 21.

Poor Seasons—Introducing Queens.

I am still keeping bees, but for what I cannot say, for it has been no profit to me for eight years. The pleasure is not very much to a very busy man. So far I have been in the business for the love I have for the honey, for when I was a small boy I always said if I was ever the owner of a home I would have plenty of honey.

Bees have done nothing for eight years, so they are getting thinned out. They have dwindled down from 70 to 24 colonies. I would like some one to name my bees for me. I have the Italian, leather-colored, 3, and 5 banded, the Albinos, the Cyprian, and the Syrian; that is, I have in the last 10 years sent for that many different strains of bees, and now I have all of them, and the best ones winter and the poor ones die, so I have what are left. This year they

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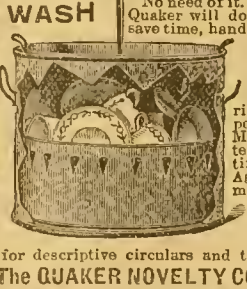

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may store a few hundred pounds of honey. The best colony stored 58 pounds.

I want to say that the yellow bees are the bees that always get the honey for me since the white clover has failed so often. If it were not for the yellow bees, I would have been out of bees.

This is the way I manage young queens; it is a little different from anything I ever saw in print: First, after receiving a queen, I take two frames, shake all the old bees off, and place them with a queen in a hive, then shut the hive up so that no bees can come in or get out. At the end of two days I go to a strong colony and take two frames of brood out, being sure the queen is not on the frames of brood. Place them in a new hive, remove some strong colony; about noon set this new hive with the two frames of brood, and leave them there 24 hours, then get the queen and the two frames of brood, and place all together. Do this late in the evening, as the queen will have bees enough to protect her; then build them up just as fast as you please. I never lost a queen in that way.

I still like to read the American Bee Journal. D. R. ROSEBROUGH.

Casey, Ill., Sept. 28.

Increasing the Honey Resources.

It seems to me this is the essential thing for bee-keepers in our Northern and Middle States—increase the honey resources. If there is plenty of honey, the bees will store it all right enough in almost any kind of hive.

Look on page 561, and read the report from the members of the Illinois State Bee-Keepers' Association. I fancy it is not so much a different-sized hive those men want as it is judicious planting and sowing that will give them a *continuous* honey-flow.

Take my own case: I am located where there is an abundance of fruit-bloom and locust; my flow is very early; after that nothing. No white, Alsike or crimson clover; no basswood or buckwheat; some golden-rod. What is of vital importance to me, and I think to hundreds of other bee-keepers as well, is to know if alfalfa will do well and *furnish nectar in my locality*. Does crimson clover do well in west Pennsylvania? and is it a good honey-plant for sure? What are the advantages to the ordinary farmer in growing the Alsike clover in place of the common red, that I may induce him to change to the Alsike?

Somebody give us all the points in favor of sweet clover as a plant for farmers to raise. H. P. JOSLIN.

Ben Avon, Pa.

[The Bee Journal will be glad to publish in full, answers to all the questions asked by Mr. Joslin. Who can, and will, furnish the information desired?—EDITOR.]

Bee-Keeping in East Tennessee.

I have been reading the American Bee Journal for almost a year, and never fail to be highly entertained with each succeeding number. I have had a few colonies of bees for many years, in the old-style box-hives, and they were the old-style black bees—in fact, I don't know whether I was ever familiar with the fact that there were any other kind than the black bees, until I became a reader of the American Bee Journal, which awakened my interest in the subject, and now I find myself compassed about with quite a number of good text-books and journals upon the subject of bee-culture, and my old box-hives have transformed themselves into nice movable-frame hives—21 in number, and all presided over by Italian queens. Instead of my apiary having a repulsive effect, as of yore, it is the nearest way to everywhere I go.

Yea, more, my neighbors are becoming interested so much, that we were moved to organize a bee-association, for the promotion of bee-culture, known as the Southern East Tennessee Bee-Keepers' Association, with Hon. M. T. Fouts, President; R. D. Mitchell, Vice-President; W. J. Copeland, Secretary; and Miss Mary Mitchell, Treasurer. After the organization, quite an interesting discussion was had on a number of subjects of interest to bee-keepers.

Bees have not produced much surplus honey here, owing, as bee-keepers think, to the oft-repeated heavy rains.

W. J. COPELAND, M. D.

Fetzerton, Tenn., Sept. 24.

List of Honey and Beeswax Dealers

Most of whom Quote in this Journal.

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CHAS. ISRAEL & BROS., 486 Canal St.
I. J. STRINGHAM, 105 Park Place.
FRANCIS H. LEGGETT & Co., 128 Franklin St.

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C. C. CLEMONS & Co., 423 Walnut St.

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CHAS. DADANT & SON.

Philadelphia, Pa.

WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central ave.

Convention Notices.

CONNECTICUT.—The fall meeting of the Connecticut Bee-Keepers' Association will be held Wednesday, Oct. 30, 1895, at the Capitol at Hartford. MRS. W. E. RILEY, Sec.
Waterbury, Conn.

Greenville Bee-Hive Manufactory.—W. R. Graham, of Greenville, Tex., has bought back the Greenville Bee-Hive Manufactory, and will continue the business in his own name. Address him for catalogue.

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Honey & Beeswax Market Quotations.

CHICAGO, ILL., Aug. 25.—We are having considerable inquiry for comb honey. We have as yet received but a few small consignments. We quote: Fancy white, 15c.; No. 1 white, 14c. Extracted, 5@7c.
Beeswax, 25@27c. J. A. L.

KANSAS CITY, MO., Oct. 4.—The demand for comb is fair, with a fair supply; extracted in light demand. We quote: No. 1 white, 1-lbs., 13@14c.; No. 2, 12@13c.; No. 1 amber, 11@12c; No. 2, 8@10c. Extracted, white, 6@6½c.; amber, 5@5½c.; dark, 4½c.
Beeswax, 20@21c. C. C. C. & Co.

PHILADELPHIA, PA., Aug. 19.—New crop of comb honey is coming in more freely and generally in good condition. Demand is now beginning to spring up. New extracted is arriving in a small way. We quote: Fancy comb, 14@15c.; good, 13c.; fair, 9@11c. Extracted, 4½@5½c. It is hard to get our market to rally after the blow it received in the spring on discovering such a large amount of beeswax adulterated. We quote pure wax, 22@25c. W. A. S.

ALBANY, N. Y., Oct. 7.—Receipts of honey, as well as demand, have increased some, and the weather being cooler, I think this month and for part of next, as usual, will be the best time to market honey. We quote: White comb, 14@15c.; mixed, 12@13c; dark, 10@12c. Extracted, white, 6½@7½c.; mixed, 6@6½c.; buckwheat, 5@5½c. H. R. W.

CHICAGO, ILL., Sep. 4.—The new crop is coming forward and sells at 15@16c. for best lots; dark grades, 9@12c. Extracted ranges from 6@7c. for white, and 5@5½c. for colored, flavor and package making difference in price.
Beeswax, 27@28c. R. A. B. & Co.

BUFFALO, N. Y., Sept. 16.—Light receipts are prevailing in our market and demand is improving. We quote: Fancy one pound sections, 15@16c.; choice, 13@14c.; buckwheat, slow sales at 8@10c. B. & Co.

CINCINNATI, OHIO, Oct. 9.—There is a good demand for choice white comb honey, at 14@16c.; dark grades found a ready sale of late, at 12@14c. Demand is good for extracted, at 4@7c. Supply of all kinds is insufficient.
Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. M. & S.

NEW YORK, N. Y., Sept. 11.—New crop of comb honey is arriving and while the receipts from N. Y. State are light, we are receiving large quantities from California. Had two cars of choice comb and have several more to follow. On account of warm weather the demand is rather light as yet. We quote: Fancy white, 1-lbs., 15@16c.; fair white, 12@13c. No demand as yet for buckwheat and dark honey. Extracted is plentiful, especially California and Southern. We quote: California, 5@5¾c.; white clover and basswood, 6@6¼c.; Southern, 45@55c. a gallon.
Beeswax in fair demand and firm at 28@29c. H. B. & S.

NEW YORK, N. Y., Sept. 23.—The market for comb and extracted honey is now open. Comb honey is not arriving as freely as expected, presumably on account of the prolonged heat, but it is selling very well, considering the hot weather we have had this time of the year. Of extracted honey there is quite a supply on the market; California and Southern with a fair demand. We are quoting comb honey to-day as follows: Fancy, 1-lbs., 15c.; 2-lbs., 14@15c.; white, 1-lbs., 13@14c.; 2-lbs., 12@13c.; fair, 1-lbs., 11@12c.; 2-lbs., 10@11c.; buckwheat, 1-lbs., 10@11c.; 2-lbs., 8@9c. Extracted, clover, 5@7c; buckwheat, 5@5½c.; Southern, 50@60c. per gallon.
Beeswax is in fair demand, with supply limited; average stock, 27@28c.; fancy yellow, 29c. C. I. & B.

Wants or Exchanges.

This department is only for your "Wants" or bona-fide "Exchanges," and such will be inserted here **at 10 cents a line** for each time, when specially ordered into this department. Exchanges for cash or for price-lists, or notices offering articles for sale, will not be inserted here—such belong in the regular advertising columns, at regular rates.

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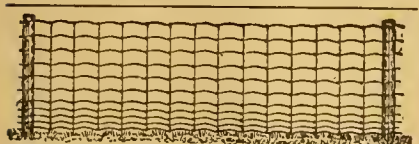
35A12 *Mention the American Bee Journal.*



FROM ANOTHER POINT OF VIEW.

I see that Old Durham rushes into print to air his views on the fence question. He seems to be perfectly **cowed** by **elasticity.** I think that Page fence a saucy, impudent thing, always **answering back** in the most aggravating manner. Then you never knew just where to find it. Now that "just as good as Page" suits me. It never "kicks" at anything, and if it's absolutely necessary to go through it, one can do it, so there!

[Signed.] OLD BRINDLE COW.

Address,

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention the American Bee Journal.

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

One Bee-Keeper Selling Another Bee-Keepers' Honey.

Query 992.—I have a good market for honey, and I could sell much more than I can produce, provided I should put my name on it and make my customers believe it is from my apiary. I can also buy honey much cheaper than I sell mine. Would it be right to sell honey under such circumstances?—Missouri.

W. R. Graham—I think not.

Rev. M. Mahin—I would not.

W. G. Larrabee—If it is just as good as your own, yes.

Jas. A. Stone—Yes, if you know it to be pure, but not otherwise.

Mrs. L. Harrison—"Honesty is the best policy." It is not right to deceive.

J. A. Green—Yes, if you are careful enough as to the quality of honey you buy.

Prof. A. J. Cook—It is never right to deceive a customer, or sail under false colors.

G. M. Doolittle—Extend your apiaries till you can produce enough to supply all customers.

J. E. Pond—Look to your own conscience for a guide. It would be a fraud to sell the honey of others for your own.

Dr. J. P. H. Brown—If the honey is as good as yours, so recommend it. Your *word* ought to be as good as your name.

Dr. C. C. Miller—It wouldn't be right to put your name as producer on any honey except that produced in your own apiary.

Mrs. J. N. Heater—It would be proper to buy and put on the market, pure honey, but it would not be right to sell it as your own production.

Chas. Dadant & Son—It is all right if you know the honey is good. There is no deception about it, at least none that need worry your conscience.

Eugene Secor—It will be right to sell your own in the manner you describe. The 8th and 9th commandments will settle the other question of ethics.

B. Taylor—Nothing is wrong that harms no person. If the honey is as good as your own, no one would be harmed, and it would not be wrong.

J. M. Hambaugh—Yes! If your neighbor does not object, and you are giving your customers equally as good an article in return for their money.

P. H. Elwood—It would not be right to lie to your customers. I should advise you to educate your customers that others produce as good honey as you. You have probably taught them differently.

C. H. Dibbern—No, unless it is perfectly understood that you did not produce the honey yourself. It is all right, however, to sell and recommend honey to your customers, if you know it is straight goods.

G. W. Demaree—My experience has been the same (some years) that you describe. I could make it profitable to buy honey *some years*, to meet a demand greater than my apiary can supply. But should I do that, I would become *a dealer in honey* to that extent, and maybe lose my reputation as a square producer. I look at it in this way: If a customer believes that he is buying honey *produced* by "Missouri," though it be but a mere fancy on his part, it is not *honest* to deceive him. "What will the answer be?"

R. L. Taylor—Under what circumstances? It would be right to put your name on the honey as a guaranty of its quality and purity, but not in order to make your customers believe something that is not true.

Emerson T. Abbott—You do not need to lie to your customers. If they know you to be an honest man, they will not ask any further questions, if you tell them you are ready to stand behind all the goods you sell.

H. D. Cutting—Yes, sir, ree! Procure *good honey*, and put it up *rightly*, and sell all you can. I have bought better honey than I produced in my own yard, and my customers received the benefit. It would be dishonest to *tell your customers* your bees gathered it.

E. France—If I sold honey that I bought, I would tell my customers where it came from, and if the honey was good I would say so. You should be a good judge of honey, find an honest man to buy honey from, then if his locality produces first-class honey, your customers won't object.

Allen Pringle—It would not be right to sell another man's product as your product; but there is certainly nothing wrong about selling any good and genuine article, no matter who produced it, so long as there is no deception. I would certainly not label another man's product as mine.

W. M. Barnum—If it was equally as good, I do not think your customers would care. Deception, as a rule, is a bad policy to follow, however, and if it were practicable, I would prefer to enlarge my apiary sufficiently to meet the demand. Would it not be the more profitable way in the long run?

J. M. Jenkins—There would be nothing wrong in putting your name on the honey, with your guarantee of purity, etc., without pretending that it came from your *apiary*. I sell honey that way without any trouble, and when questioned as to its origin, or otherwise, I answer without reserve. I don't know how you could make you customers believe it was from your apiary, without resorting to falsehood and deceit, and it is unnecessary for me to say if *that* would be right.

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is always economy to buy the best, especially when the best cost no more than something not half so good. OUR FALCON SECTIONS are acknowledged to be superior to any on the market. The same is also true of our HIVES and BEE-KEEPERS' SUPPLIES, of which we make all modern styles. OUR PRICES will be found as low as those of any of our competitors, and in many cases lower, and you are always sure of getting first-class goods. We also publish THE AMERICAN BEE-KEEPER, a monthly magazine (Fifth year) at 50c. a year, invaluable to beginners. Large illustrated catalogue and price-list free. Address,

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JAMESTOWN, N. Y.

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If you do not sell the honey? That's what we are here for. Get our high prices before selling.

C. R. HORRIE & CO.,
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For Circulars, apply to CHAS. F. MUTH & SON. Cor. Freeman & Central Aves., Cincinnati, O
Send **10c** for Practical Hints to Bee-Keepers.
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Has No Sag In Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

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Sole Manufacturers,
Sprout Brook Montgomery Co., N. Y.

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Quality always the best. Price always lowest.

Working Wax into Foundation by the lb. a **Specialty.** I can make it an object for you in any quantity, but offer special inducements on straight 25 or 50 lb. lots. Or for making large lot of Wax into Foundation. I am furnishing large dealers, and can also please you. **Beeswax taken at all times.** Write for Samples and Prices, to

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Ten Thousand Bee Keepers

to whom will send my new Price-List as soon as it is ready.

Try the "St Joe" Hive.

EMERSON T. ABBOTT,

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A THOUSAND TONS OF COMB HONEY

Will be made on the Foundation sold by us this year. That is why

WE NEED BEESWAX.

Now is the time to order your Foundation for 1896. Although the

PRICES ARE REDUCED

on both Beeswax and Foundation for the balance of the season, we want all

The Beeswax You Have to Offer.

☞ Send for Catalogue of **Bee-Supplies, Langstroth Revised, etc.**

CHAS. DADANT & SON,

Mention the American Bee Journal. **HAMILTON, Hancock Co., ILL.**

Honey as Food and Medicine.—A new and revised edition of this 32-page pamphlet is now issued. It has 5 blank pages on which to write or paste recipes taken from other sources. It is just what its name indicates, and should be liberally distributed among the people everywhere to create a demand for honey. It contains a number of recipes on the use of honey as food and as medicine, besides much other interesting and valuable information. Prices, postpaid, are: Single copy, 5 cts.; 10 copies 35 cts.; 50 for $1.25; 100 for $2.00. Better give them a trial. Send all orders to the Bee Journal office.

THE A. I. ROOT CO.

56 5th Ave., CHICAGO, ILL.

GEO. W. YORK, Manager. **Send for Free Catalog.**

Appreciating the value of Chicago as a distributing point, and having the opportunity presented to us we have bought out the good-will and stock of bee-keepers' supplies of Thos. G. Newman, who has conducted a successful business there for many years. The following notice explains further:

To whom it may concern:—

I have this day sold to the A. I. Root Co., of Medina, Ohio, my business in Chicago, as "Dealer in Bee-keepers' supplies," together with the good-will of the same; and while thanking my many friends and customers during the past 20 years for their generous patronage, I would bespeak a continuance of the same for my successors, who are well-known manufacturers and dealers in apiarian supplies, and can fill all orders, whether large or small, with promptness and accuracy.

THOS. G. NEWMAN.

Chicago, Ill., Sept. 16, 1895.

We have secured the services of **MR. GEO. W. YORK** as manager, who needs no introduction to most of our patrons. Besides his sterling business qualities and promptness, he has had long experience and drill in the supply business under T. G. Newman & Son, before he purchased the **AMERICAN BEE JOURNAL,** of which he is still editor and proprietor.

A full assortment of

ROOT'S BEE-KEEPERS' SUPPLIES

will be constantly on hand, for sale at catalog prices, and prompt service may be had by addressing as above.

Mention the American Bee Journal. **The A. I. ROOT CO., Medina, O.**

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AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS

35th Year. CHICAGO, ILL., OCT. 24, 1895. No. 43.

Report of the Proceedings

OF THE

Twenty-Sixth Annual Convention

OF THE

North American Bee-Keepers' Association,

HELD AT

TORONTO, Ont., Sept. 4, 5 and 6, 1895.

W. Z. HUTCHINSON, SEC.

(Continued from page 662.)

THIRD DAY—FRIDAY MORNING SESSION.

The first thing in the morning came the report of the committee on

The Delayed Report of 1894.

The report of the committee was as follows:

Your committee to which was referred the matter of the refusal of Mr. Frank Benton to furnish a full Report of the proceedings of the meeting of the Association in 1894, as per vote of the Association, although he had been paid for making said report, find that he has no valid excuse for such refusal, and recommend that he be requested to at once furnish the balance of the report, or refund the amount that he has received for such service; and, in case of his refusal to do either, or both, that he be censured by the Association.

A. B. MASON,
IRA BARBER,
J. T. CALVERT, } *Com.*

Upon motion the report was accepted and adopted, after the following discussion upon it had taken place:

Frank Benton—The Report has been ready for months, and it can be had at any time if it will be published as I furnish it; but I am not going to have it mutilated.

Wm. F. Clarke—This is something that Mr. Benton has nothing to do with. He was employed as Secretary to get out the Report. It is his business to turn it over to the man selected by the Association to print it. When he has done this he has cleared his skirts. Will he do this?

Frank Benton—I will if—

Mr. Clarke—There must be no "ifs" about it. Will you, or will you not, turn over that Report?

Mr. Benton—I will.

President Holtermann—That settles it.

Next came a long essay by Mr. Allen Pringle, of Selby, Ont., on

Some Mistakes of Bee-Keepers and Bee-Journals.

Bee-keepers are mostly worthy and level-headed people, but they are not infallible. Like other people, they do actually make mistakes. All men, and a few women, make mistakes, and I have sometimes thought that the mistakes of humanity were the biggest part of their doings; and that it was just possible (by the looks of things, sometimes) that the world itself was one big mistake. If, however, in the sum of things, it should prove to be otherwise, the anomaly is nevertheless here that this world is fairly full of mistakes, misdeeds, and misdoings, with miserables, misanthropes, and monstrosities in plenty. But if the world itself, in the abstract, is not quite a mistake, in the concrete it has produced lots of men (a few of them bee-keepers) who are out and out blunders, worse than useless. They are pests in society and barnacles on the Body Politic. (Of course this is not applicable to bee-keepers to any great extent. I am coming to them presently.)

Through ignorance, passion, or perversity, men violate the laws of health and incur sickness, pain and premature death. They violate ethical law, and demoralize themselves; social law, and degrade themselves; economic law, and impoverish themselves, and so it goes. If the wise man (including the bee-keeper) is he who uses his organism and environment rightly, and the fool (including the bee-keeper) is one who does the contrary, then there are a thousand fools in this world for every wise man that's in it. I am not going quite as far here as the cynical sage of Chelsea (Thos. Carlyle), who has left his opinion on record that the world is mostly made up of fools.

But I am not particularly concerned here with the follies of mankind in general, but I *am* concerned with the follies and mistakes of bee keepers in particular. The first mistake that some bee-keepers make is made, strangely enough, before they become bee-keepers. The first mistake, with them, is in becoming bee-keepers at all. And this is an unprofitable mistake. If the man is square and the pursuit round, or the man round and the business square, there will be a misfit, and consequently a mistake. The world is full of such mistakes. Men persist in getting into the wrong places. They do this because of ignorance, or conceit, or ambition, or greed, or something else higher or lower, as the case may be. In the matter of bee-keeping, however, (I now refer to progressive, expert bee-keeping) there are, I am inclined to think, fewer misfits than in most other occupations. The reason of this is not far to seek. A large majority of bee-keepers are bee-keepers first and foremost because they love the business *as a business*, as well as the dollars it brings. And this attachment is in itself an evidence of special aptitude. As a rule, the business or vocation to which the boy or man naturally gravitates is the one to which he is naturally adapted. In other lines the particular art, trade or profession is usually selected by others *for* the boy, instead of *by* the boy for himself. It is selected in most instances without any references to, or knowledge of, his natural qualifications or disqualifications for the position. Hence the numerous misfits—the manifold life-failures. But this is not generally true of bee-keeping, as the business is spontaneously selected by the subjects themselves. Some men, it is true, go into bee-keeping solely to make money out of it, and such would love any business which "panned out" handsomely, whether the business was night-soiling, bee-keeping or gold-gambling! But even such men are apt to make a success of the bee-business without special adaption, because they bend all their energies to it—not through a love for the bees or the business, but for the money that's in it. Hence it is, that while in the lower walks of bee-keeping there is blundering in plenty, in the higher grades of expert bee-keeping the mistakes and failures are much less common than in most other occupations.

Primary or preliminary mistakes aside, let us now turn to a few of the supplementary mistakes, big and little, which bee-keepers, high and low, fall into.

In the first place, when a man gets by mistake into the wrong business (for him) of tending bees, it is another mistake not to get right out of it again before his money and himself have parted company. When the ambitious novice has seen,

heard and read just enough about bee-keeping to swell his head and fill it with the idea that he was specially predestinated to the business, and that it was foreordained that he should make a fortune out of it, and that all he has to do is to go *into* it and *through* it to said fortune in a very short space of time—when this is the state of things in his upper *sensorium*, he is about to make a grand mistake, and his little capital is about as good as gone. To make a little fortune out of bee-keeping (saying nothing about a big one) it takes time and patient, persistent work, as well as special aptitude and ability; and, in addition to all this, an extra locality for the abundant yield of nectar. But a little fortune may undoubtedly be made under the favorable conditions noted.

When the novice sets out with a score or more of colonies to start with, this is a mistake. With such a number he makes so many mistakes before he gets experience, that loss instead of profit is soon down in his ledger. Probably his first winter fixes off his 20 colonies with their increase. As in so many other handicrafts (and *headcrafts*, to coin a word) nothing can take the place of experience and manipulation in modern scientific bee-culture.

Again, when this neophyte (with the big head) conceives that he can construct a hive with a new wrinkle or two to it, which will be *the* hive among *all* hives, consumes precious time in doing it, and expends his money patenting and bringing it out, he discovers his mistake after his time and money are gone. When he goes off into this thing and that, to invent this fixture and improve that, and after accomplishing his objects finds, to his chagrin, that the whole ground he has been so diligently and hopefully exploring has been gone over and over long ago, it just begins to dawn on him that he has made a costly and absurd mistake.

I do not wish to discourage mechanical skill or inventive genius, but to simply point out the folly of wasting time and money in digging for what has already been dug out. This is a common mistake among young bee-keepers, and not too uncommon among older ones. Experience in mistakes is useful to some men, but not so to others. The wise man will never make but one or two mistakes in the same line. His "bought wit" (maybe dearly bought) serves him.

> "Bought wit is the dearest,
> But mother wit is the clearest,"

it has been said. That hardly means that one rich in "mother wit" will not make mistakes, but the man with mother wit will profit by mistakes and never repeat them, while the other fellow will repeat them. I know a man in our county who goes into nearly every patent penny prospect to make money which comes his way, and although in nine cases out of ten he "comes out at the little end of the horn" financially, he still loves the patent fixture, whatever it may be, and goes right in as usual with the next itinerant speculator that comes round, as if nothing unpleasant to his pocket had happened. That man tried bee-keeping, and, of course, failed—tried again, and would doubtless be trying yet only for that "business end" of the "varmint" which proved too much for him.

It is a mistake to suppose that the bee-keeper who makes the business profitable is a sinecurist. While it is true that bees usually "board themselves" and help to board many others, the shiftless bee-keeper who builds on that pleasant fact makes a mistake. Their industry will neither implement nor supplement his idleness. As eternal vigilance is said to be the price of liberty, so is eternal industry and application the price of success in apiculture.

As the wintering of bees in these latitudes is really the most difficult part of bee-keeping, the bee-keeper who neglects or fails to post himself in this essential makes a fatal mistake—fatal to the bees and fatal to his profits.

The bee-keeper who puts inferior queens, or old queens, into winter quarters makes a mistake, and this mistake is often made.

The bee-keeper who leaves his colonies short of stores in the fall, expecting to feed them in the winter or spring makes a serious mistake, for even though they may never be actually short for present needs, the deficient stores operate against them, especially in the spring when they like to see plenty, and need plenty for breeding. Furthermore, it is a mistake to feed bees in the fall that are to be wintered, either to supply deficient stores or for other purposes. This will be disputed, but that, too, will be a mistake. Of course, supplying colonies in the fall with frames full of honey is no mistake, but that is not feeding. To feed is to give liquid or some kind of syrup, honey, etc., which for several reasons is a mistake.

It is a mistake to winter bees on sugar syrup, or anything but honey, except in an extremity—not because the bees will not winter on syrup, but for other reasons. The first is, the honey is the natural and therefore the best food; the second is, the excitement and work of storing the liquid, curing and capping it in the fall when the bees ought to be quiet, shortens their lives; the third is, in nine cases in ten a good deal of the syrup will be left uncapped in the bottoms of the frames, and will absorb moisture and deteriorate; the fourth is, it crowds just that much more honey on the market to lower the price; and one more reason is, that the use of sugar in the hives for any purpose excites prejudice in the minds of the consumers, and suspicion of adulteration, and the real fact is that some of the syrup, more or less, will, in many cases, find its way into the honey that is taken out for sale. These are my reasons for saying that the feeding business is a mistake, except *in extremis*.

It is a fundamental mistake to try to make something else which is not honey take the legitimate place of honey, either *in* the hive or *out* of it, or to try to make honey out of something else than nectar, either for bee-food or human food.

It is a mistake for any bee-keeper, who *is* a bee-keeper, not to produce both comb and extracted honey. It is a mistake to have a large hive for the former, or a small hive for the latter.

In producing honey in sections, it is a mistake to use full sheets of foundation; and in the brood-chamber and extracting-stories it is a mistake not to use them. The less the better in the sections is the right rule, and no mistake. This, too, will be disputed, but the dispute will again be a mistake. No section foundation has yet been produced that will turn out a section of honey as satisfying to the discriminating consumer, and as satisfactory to the general dealer, as the natural section without foundation, except a starter.

It is a mistake to use wide sections or single-slotted sections, or slovenly-made sections.

It is a mistake to leave the supers on the hives till every section is completely filled and capped; and it is a mistake to put them in a cool or damp place when you do take them off. It is a mistake, too, to put them at once on the market before the market is ready for them.

It is a mistake to sell sections of honey to a customer without telling him or her, at least twice, to put them in a warm, dry place. If you don't, ten to one, the sections will be put in the cellar where they will spoil, and your own credit, as well as your customer's pocket, will suffer. And you must repeat this injunction *viva voce* every time you sell them sections of honey, because they forget it, and hardly ever read your solemn admonitions on the label.

In taking extracted honey it is a mistake to make a practice of extracting honey before it is ripe. It can be ripened artificially, but the natural way is best. It is a mistake to can and seal up the honey directly from the extractor, unless it is all capped over before extracting, and even then it is not always ripe. It ought to stand for a short time exposed in a hot, dry atmosphere; then seal up for the best results. It is a mistake to put an ounce of extracted honey on the market which is not fully ripe. It may turn sour in the dealer's or consumer's hands, and make trouble.

It is a mistake to make a practice of extracting honey from the brood-chamber, because, not only is the young brood disturbed and often thrown out in the honey, but the pollen comes out, too, injuring the flavor and color of the honey, and giving it a tendency to sour. It is a mistake to have any pollen at all in your extracting-frames, and a still greater one to have it in the sections. It is, therefore, a mistake to allow the queen up in the extracting-stories or in the section supers. Wherefore it is a mistake not to use the perforated-zinc in both cases. This will be hotly disputed, too, but no matter, it is true all the same.

In liquifying honey it is a mistake to raise the temperature over 140°, and it is another mistake to let it stand unsealed after liquefaction. To preserve aroma, flavor and fluidity, seal it up hot. And it is an offensive, unprofitable and unpardonable mistake to put honey of any kind on the market unripe, untidy or unclean.

There are a thousand and one other mistakes in bee-keeping, but I can here only glance at about a score and one more of them.

It is a mistake on your part to have foul brood in your bee-yard if it is there through your own negligence or mismanagement, and, however it gets there, it is a great evil to *have* it there and to *leave* it there. It is a mistake to try to hide it and neglect to take prompt measures to get rid of it by any other cure than the inspector's cure—especially if he was around. And to even hint to him that there was any other salvation from foul brood except through his plan, would be a dangerous mistake. That his cure is the sole and only real and genuine cure for foul brood on the face of the earth is what you must first of all get yourself seized of if you want to

"stand in" with, and make yourself "solid" with, the inspector; and then you are safe and no mistake, and your yard will be cured and no mistake. Neither would it be safe to behead the surplus drones in the brood-chamber when the inspector is around. It *is* a mistake, however, to behead the drones, inspector or no inspector. That is not the proper way to get rid of them. The way to get quit of them is not to have them.

It is a mistake not to get the inspector promptly into your bee-yard if your bees have foul brood.

Among other mistakes of bee-keepers—and those who are not bee-keepers—is the habit of standing to fight belligerent bees, and knocking their hats to pieces, when unexpectedly attacked without any other armor of defence. The proper thing to do is—with hat well down and hands over the most tender parts of the face—to make off *instanter*, and into the nearest building, or under cover of some kind away from the colony or apiary, and there defend yourself, which will be easy, as very few bees will follow you in your retreat. When you stand to fight them where you are attacked, re-inforcements of the enemy will pour right in on you, and you will suffer for your foolish mistake. I have noticed that 19 out of 20 persons who come around a bee-yard will, when attacked, only go away a few feet and begin a wild and futile fight with them instead of dodging away instantly under cover as suggested above. Of course the bee-keeper himself is not supposed to run away from his bees except under the direst necessity. With the heroism of a stoic, and the affected coolness of a philospher, he will take a good many stings before he will beat a cowardly and inglorious retreat in the presence of his company. His pride will stay his legs, and, unlike Mark Twain, will hold back the terrible yell of pain he feels like giving.

By way of parenthesis:—As the distinguished Mark was one day walking the streets of a rural town in England, in the company of a celebrated divine, he suddenly felt an irresistible impulse to yell—without bees, wasps, hornets, earthquakes, or any other objective cause in sight. He told his companion of his impulse, adding that he "*must* yell." The divine made no objection, saying it would not harm him any. With that, Mark stepped back a little and gave such an Indian war-whoop, or yell, as could be heard for miles around. The astonished denizens of the neighborhood quickly gathered around the strangers, asking what was the matter. Twain replied that there was "nuthin" the matter—that he wanted to yell, and yelled, and that was all there was to it. Now, the difference between the droll Mark and the aforesaid bee-man, is that the one yelled because he wanted to, and the other didn't yell because, though he wanted to, yet he didn't want to.

The gritty bee-keeper (who is a "*true grit*") neither runs away from his bees nor yells, and saves his prestige and credit. But his "best holt" is to be prepared on occasions for contingencies, by having a well-charged smoker at his side, and a handy veil and mittens in his pocket. In most cases the smoker will be sufficient, but in a desperate strait he can whip out his veil and gloves, put them on, and stand his ground to the last. It is certainly a mistake for the bee-master himself to run away from his bees (or yell) except to save his life.

We now come to the bee-journals—to the editors, indeed, for of course a bee-journal is largely what its editor makes it. It's a pity we have so little time and space left for our friends, the editors. Still, they do not need much, as they speak well for themselves—and *of* themselves—an' wi' hirplin lear an' clishmaclaver they speed their glaikit quills. That they are great men in the kingdom of beedom nobody will deny. Still, and for all that, they do make mistakes like the rest of us, not only outside in the bee-yards (when they happen to see one), but inside—in that inner *sanctum sanctorum*, sacred to all editors, where they play Sir Oracle, and grind out all manner of bee-paragraphs, and bee *bon mots*, and bee-editorials, as well as homilies, exhortations, sermons, and other literary curiosities too numerous to mention—where they cast out into the waste-basket whatever doesn't suit them, and print what does suit them—where they curtly decide to shut down on the discussion just as it is becoming interesting to their readers, just as the sparks of truth and light begin to fly out from the friction of minds and the clash of thoughts—in short, just when "the fur begins to fly"—where they decide that this discussion has gone far enough, and that it must be stopped "right here" (with emphasis)—all because the editor, in his superior wisdom, thinks it ought to be stopped, whether any one else thinks so or not;—where they soft-soap this "brother," and gush over that "friend," but "sit down" on the other fellow, and deny him a hearing—in that inner retreat where these erudite editors correct the bad spelling and bad grammar of sundry correspondents, who, like Josh Billings, "have talent but can't spell," and where they likewise correct good spelling and good grammar and make bad out of it (no joke that, but an actual fact which indicates an amount of self-complacency and self-sufficiency which hardly anybody but a bee-editor could carry gracefully).

Still, these editors are mostly good and clever fellows, and "know the side of a barn," or of a bee-house, when they see it, and we may well have philosophy enough to overlook their follies and foibles—their conceits and their mistakes. No doubt they do as well as they can, and in some cases that is saying a great deal, while in others it is not saying much.

I do not wish to pick any quarrel with or unduly disparage any of these editors. Far be it from me, for "are they not all honorable men?" Still, I ask no quarter from any of them. I would certainly like to see them with a little more editorial courage and independence, and with less provincialism and less fear of Mrs. Grundy before their eyes. With one or two exceptions they are evidently afraid to criticise each other as occasion may demand, and profess greatly to love each other, and no doubt they do, for "two of a trade," you know, always agree (over the left).

When an editor allows his own whims and prejudices (which ought to be strictly personal to himself and private) to influence him as an editor, he makes a mistake. When he coolly draws his quill through the sentences which do not suit him in the manuscript of a correspondent who is quite responsible for his own utterances, and knows, perhaps, as well as the editor, what he ought to say in the premises and what he ought not to say, that is a mistake. When he attempts to correct a grammatical sentence and succeeds in making it ungrammatical, that, too, is a mistake.

But we all make mistakes in one way or another, and all, perhaps, live in "glass houses." Nevertheless, fire away your stones. I am particularly partial to the intellectual encounter—the friendly clash of arms—and am, I think, wide open to correction and conviction on every question outside the hard figures of arithmetic and the grim facts of mathematics.

The bee-journals and reviews are, on the whole, doing useful and excellent work, and, some of them giving treble value to the ordinary bee-keeper for his money. Furthermore, we must give the apiarian editors credit for great industry and perseverance. They work without let up—perhaps for small profits—and do their best as they see it. None of us can do more.

This paper, essaying, as it does, to point out many mistakes in others, may itself, from the stand-point of this one and that one of you, be full of mistakes, the principal one of which is, I hope, the length of it. I thank you for your patience.

ALLEN PRINGLE.

Pres. Holtermann—There is a spirit running through this essay that all must admire.

Wm. F. Clarke—There are two things that ought to be tabooed at our conventions. They are party politics and religion. I wish Mr. Pringle would consent to cut out what he said about the world being a mistake. It is a slur upon the Creator. I think that he is correct about the editors. If they allow a discussion to begin, it should not be cut off until it has been exhausted.

Mr. Pringle—I do not think that there is another man in this assembly that would put the construction upon that sentence that Mr. Clarke has put upon it. It was more of a joke than anything else, and it was supposed that it would be so taken.

Geo. W. York—I watched closely while the essay was being read, and I could see nothing in it at which exception could be taken. I consider it one of the very best essays read at this convention. I want the pleasure of printing it *in full*.

(Continued on page 693.

Liberal Book Premiums are offered on page 690, for the work of getting new subscribers to the Bee Journal. It is a fine chance to get a complete apicultural library. Think of it—40 cents' worth of books given to the one sending a new subscriber! Remember, please, that *only* present subscribers to the Bee Journal can take advantage of that offer. The publishers of the Bee Journal believe in making it an object for the old subscribers to push for new readers among their neighbors and friends, hence the generous premium offers to them. It is hoped that all may begin *now* to work. Sample copies of the Bee Journal free.

Contributed Articles.

On Important Apiarian Subjects.

Large vs. Small Hives—A Review.

BY CHAS. DADANT.

After reading the great number of articles devoted to the subject of large vs. small hives, I had concluded not to write any more on this question; but I see that many readers of the bee-periodicals desire to see the discussion continued, so I will try to refute the objections of some of the partisans of small hives, and, in the following numbers, revise the whole question, from the stand-point of a bee-keeper who, for more than 30 years, has studied it with the sole object of securing the best possible results in honey-production.

Mr. Davenport, on page 376, writes: "I have had queens that would keep 10, and in a few cases even 12, frames full of brood; but these queens needed to be prolific, for their bees were so short-lived that these colonies could not store as much surplus as others whose queens did not keep eight frames full."

Our experience is altogether different. Our most prolific queens rear the strongest colonies which always give us the largest crops. What we want in a queen, above all things, is great prolificness. The more bees in a hive, at the beginning of the honey crop, the more honey is reaped, and I think the opinion of Mr. Davenport is not accepted by one bee-keeper in a hundred.

In regard to the short living of bees from a very prolific queen, I wonder what means Mr. Davenport has taken to ascertain it! The colonies which are the most populous before winter have generally the largest number of bees in the spring, and, of course, at the beginning of the harvest as well. Can Mr. Davenport explain how the eggs of a queen which is able to lay but 2,000 eggs per day in the best season, can produce bees that live longer than the daughters of a queen that can lay 4,000 eggs in 24 hours?

Mr. Davenport continues: "Again, I have had very prolific queens whose bees lived long enough; but they were worthless so far as surplus honey was concerned, for their entire time and attention seemed to be devoted to rearing bees and swarming." Indeed, Mr. Davenport seems to have had very wonderful bees. There is an undeniable and well-authenticated fact—the workers cease to take care of the brood after they are about 15 to 18 days old. They then become almost exclusively field-workers. Any one can easily verify this fact by introducing an Italian queen in a pure-black colony in the midst of the honey harvest. The black bees will cease to work inside of the hive as soon as the young Italian bees are old enough to take flight, when the number of young bees is sufficient to fill the requirements for nurses. The salivary glands, which assist in making the jelly of which the larvæ are fed, become atrophied in the old workers long before their usefulness is at an end as honey-gatherers. It is very probable that in Mr. Davenport's experience, the profuse breeding of which he speaks was begun too late, perhaps owing to lack of stores, perhaps to some other cause, and in such a case the numerous bees were of no use to gather the crop, for it is not all to have prolific queens—they should be given the means of producing bees in time for the honey crop, which is often of so short duration. Much depends upon the foresight and care of the bee-keeper; for the bee-business is "a business of details."

As to the populous colonies swarming more than the others, there is no doubt about that, especially if they are not furnished all the room they need in time; or if they are left exposed to the direct rays of the sun; or if their entrance-room is inadequate to their requirements for travel and ventilation; or if they are allowed to rear too large a quantity of drones which annoy them by their bulk. There are many things to be considered on this question of swarming, and it may be almost entirely prevented if properly attended to. Our natural swarming rarely reaches 5 per cent., and the fact is that we could not keep up the number of our colonies if we relied on natural swarming at all. We much prefer division of colonies, which enables us to select our breeders, and systematize our selection.

A queen will rarely leave the hive as long as she finds empty cells to receive her eggs, and the bees will rarely make preparations to swarm if they have plenty of empty cells to put their harvest.

Mr. Davenport writes also: "Some of the advocates of large hives tell us that bees, in such hives, will rear a good many more bees during the latter part of the season, and thus have more bees for winter; and, such being the case, they will winter better and build up faster in the spring." Yes, I am sure that such practice is the right way to success. But Mr. D. thinks that such late breeding costs too much; he says about $100 or more, in large apiaries. He prefers to feed his bees in the spring, and he employs a man in every apiary to do the work. Why did he not give us the amount of his expenses in food, in work, the cost of wintering, and the amount of loss in winter?

But I am not alone in advocating the rearing of bees before winter. One of the strongest advocates of small hives (Mr. B. Taylor, on page 407) writes that, last winter, he lost 70 colonies which were full of honey, because their queens had ceased to lay about Sept. 15, and the number of bees in the hives was too small for a good wintering.

Mr. Davenport not only thinks that an 8-frame hive is large enough, and that a queen which can just fill the eight frames is better than one that can fill 10 or more with brood, but he writes also: "My experience has been that, as a general thing, 8 frames are enough for the best queens that we can get at the present time." But his practice does not agree with the above assertions, for he says, on page 310: "From strong colonies that do not get the swarming-fever at the commencement of the flow (of honey), the two middle combs are removed, and two empty ones put in their place. Then the two outside ones are put next to these." Mr. Davenport is evidently not satisfied with the amount of brood reared, since he removes two combs of brood and puts two empty combs in their place, and even wants to get the two outside combs filled with brood, which are usually filled with pollen and honey for provisions. His queens are thus expected to fill 10 combs with brood, or 78,000 eggs in 21 days, or 3,700 eggs per day. So, Mr. Davenport, who thinks 8 frames are enough, on condition that he manipulates his bees so as to get the same number of eggs as he would get in a 12-frame hive, does not count the loss of time in going through these manipulations, nor the loss in brood, for he writes that some of the larvæ will die, etc.

In Gleanings for June 1, Mr. B. Taylor writes: "I have great respect for the Dadants as bee-keepers, and their argument for large hives had almost persuaded me, but now comes Mr. Dadant in the American Bee Journal of May 9, and states that his average yield of extracted honey, from colonies in his big hives, is only 50 pounds, and that his greatest yield was only 150 pounds, in average, per colony. Friend Dadant, you have, to me at least, given away the whole argument for your large combs and brood-chambers.....The seasons of 1893 and 1894 were regarded as bad ones here, and yet we harvested more fine comb honey each of those years than Mr. Dadant says he gets in extracted in average good years. No, Friend Dadant, you may go ahead with your big hives—I now refuse to be persuaded."

Mr. Taylor is sure that if his bees had been in our apiary, his small hives, in 1893 and 1894, would have given him as large crops as he got in Minnesota? Then it is the hive which gives the honey, not the flowers. No doubt that in the middle of the Desert of Sahara, the bees in his small hives would gather a large honey crop! Does Friend Taylor think that there are no small hives in our neighborhood? Does he think that those small hives are yielding a surplus twice as large as ours, and that we shut our eyes to the fact? No, Friend Taylor, we do not get such crops here as they do in Minnesota. Nor did we know that a man could harvest 50 pounds of comb honey, on an average, netting probably $6.00 per colony, and call it a bad season. Let me see: We have 350 colonies of bees. At $6.00 per colony, in bad seasons, we would get $2,100. Then in a good season, we would get the wages of a Senator! We had better move to Minnesota, and not let Friend Taylor get rich without us!

Joking aside, we evidently do not live in as rich a honey district as Friend Taylor does. Our country is well populated, the land all in cultivation. There are but few honey-producing trees in our woods, and the main crop upon which we depend is white clover, although, in sufficiently wet seasons, we get considerable honey from fall blossoms. But in the past four years the white clover was all destroyed by drouth, and even Friend Taylor's bees could not have found anything from which to gather honey. The only practical comparison that can be made, must be made between hives of different size in the same apiary, and on a sufficient scale to determine that the inequality in results is not due to chance. This trial we made years ago, as we have repeatedly said, and if any

one was to enquire of the farmers on whose farms we keep bees, the answers would invariably be in favor of the large hives. These people do not use any arguments, but only their eyes. They have seen the largest crops taken off the largest hives, and that is enough. All the arguments that could be enclosed in a hundred pages would avail nothing against the facts.

Mr. Taylor wrote in the American Bee Journal for June 2, that he lost 70 colonies last winter. Mr. Davenport lost a number also, yet these gentlemen winter their bees in the cellar; while a neighbor of Mr. Davenport, who sold to him nine colonies of bees, successfully wintered his bees on the summer stands. Mr. Davenport narrated the fact in the American Bee Journal of June 20, viz.: "The bees were in large box-hives. They were all powerful colonies, and the hives heavy with honey, although they had been out-doors all winter. The owner always left them out without any protection whatever, and he did not remember ever losing a colony that had enough to eat."

Why did these bees winter better than those of Messrs. Taylor and Davenport, who take the trouble of putting them into the cellar for winter? I answer:

1st. They were in large hives.

2nd. They had a larger number of bees, and Mr. Taylor acknowledges that one of the causes of his large loss was the want of young bees.

3rd. They had been able to store and keep for winter some of the lightest-colored, early-harvested honey; while Mr. Davenport thinks it is best to compel the bees to put all the light honey in the sections. He writes that bees in large hives do not give as much surplus by 14 to 16 pounds. But if he will compare the loss of colonies, the cost and work of feeding bees, of wintering in the cellar, of adding combs and exchanging and removing them, he will see that the balance is in favor of large hives, even if they are heavier in the fall; for there is no need of disturbing them from their summer stands. Hamilton, Ill., Oct. 11, 1895.

What Dr. Miller Thinks.

Contraction.—I'm not expecting to see the columns of this journal badly crowded with replies to the question of Bro. Secor on page 648, as to what will prevent bees putting pollen in sections when the room is much limited in the brood-chamber. There seems a tendency on the part of the workers to store pollen in the lower story, and if there are two stories of brood-combs I think you will find most of the pollen in the lower combs; but limit too much the amount of brood-combs, and the bees seem forced to consider the sections as part of the brood-chamber for holding pollen and brood. An excluder will keep the brood out but not the pollen, and I suspect the only way Bro. Secor can keep the pollen out of sections is by giving room enough for it below the sections.

Laying-Workers.—The plan given on page 649 for dealing with laying workers is one that has been given many times, and for aught I know is generally or always successful. But the reason given for its success may well provoke a challenge. The theory is that if all the bees are shaken from the combs 100 feet from the stand, "the layers, which had never left the hive before, and would also be too heavy to fly, will fall to the ground and get lost." What evidence have we that the layers have never left the hive before? Don't they at least have a play-spell and mark the location when they attain a certain age? But late investigations have shown that instead of a single laying-worker, a large number are in the hive, a majority of the colony perhaps having taken up the business of laying eggs. In such case, if the layers should not return to the hive the colony would be reduced a half, and what has become of the laying half?

Instinct.—I don't know that it matters much to the practical bee-keeper whether the views expressed on page 650 be correct or not, but I confess one is likely to be somewhat bewildered, no matter what view one takes. Deny intelligence to the bee and you deny what seems sometimes very direct testimony on its part. Admit its intelligence, and you are at sea to explain how in many cases such utter stupidity is shown. What intelligence is shown by the bee in going directly to its home on returning from a field a mile or more away! Change the location of its hive a rod or more, and it has no great difficulty in finding it if no other colonies are near. But remove it five feet to the other side of another colony, and it will never find its home. What intelligence is shown in rearing a queen from a worker-larva when the old queen is removed! And yet what utter lack of intelligence is shown in trying to rear a queen from a drone-larva when no worker-brood is at hand. The bees seem to know enough to recognize a difference, for the drone-larva has a different cell built around it, but if they know enough to know it's a drone, why don't they know enough not to fool away labor and material in trying to turn it into a queen? Sometimes they seem to know a lot, and then again they don't seem to know beans. But then other folks are a good deal the same way.

Blacks vs. Italians.—On page 649, A. S. Rosenroll says all experienced and disinterested Swiss bee-keepers give the preference to blacks for gentleness, hardiness and industry. My reading of journals coming from that region has hardly impressed me in that way, although I may be mistaken. He thinks that when blacks are found to be vicious, a close examination would show that they are not pure. In view of the great mass of testimony to the gentleness of the Italians, is it not possible that when they are found to be vicious a close examination would show an admixture of black blood?

Texas.—For those of us who have harvested no honey, there's a crumb of comfort in reading that the bees of the great honey-yielding State of Texas, represented at the State convention, had only yielded 5¼ pounds per colony up to Aug. 21. But where were the Atchleys?

Charles Dadant.—On page 652 is the statement that "Mr. D.'s experience covers a period of over 30 years in France and America." It covers a period of more than 30 years in America, but was any part of his bee-keeping experience in France? One may readily be excused for making such a mistake—if mistake it is—from the fact that Mr. Dadant has been the most potent factor in introducing modern methods of bee-culture in France. He is in fact better known in France than in America. And that's saying a good deal.

Non-Stinging Bees.—On page 654 is a description of bees that took no offense at having their hive kicked over, and Mr. McArthur is not the only one who claims to have originated a strain of non-stinging bees. Interest in non-stingers is perhaps to take the place of that in 5-banded bees. I think it likely that if they could do so by a word, the majority of bee-keepers would change their bees to non-stingers. And I feel pretty sure that a majority of that majority would afterward regret it. If I kept my bees on the house-top, to which no one could gain access without entering the house, then I think I would very much like to have bees that would never sting me. But nearly all bees are kept where they are very easy of access, and about the only security against thieves is the sting of the bee. If all stings were struck out of existence, I think nine out of every ten bee-keepers would find bees and honey such insecure property that they would heartily beg for the return of the stings.

What Ailed the Bees?—I have some doubts whether Andy Cotton gives on page 655 the correct answer to the question of A. E. H. He says he never saw anything of the kind unless a colony was queenless, and it is hardly likely that all of the bees of A. E. H. were queenless. So the trouble is one that Mr. Cotton has never met, and I doubt if his guess at the answer is the best. That queenless bees crawl on the ground is something new to me, and I never knew that queenlessness would make any difference in the deportment of bees when badly affected with diarrhea. Do the observations of others agree with those of Mr. Cotton? Marengo, Ill.

Overstocking in Colorado—Alfalfa.

BY F. L. THOMPSON.

Replying to Mr. Carlzen's request on page 576, I estimate my yield this year at about 24 pounds of comb honey per colony, spring count; last year, between 40 and 50. Last year 120 more colonies, since removed, were in this same yard.

But that is not the point. I don't doubt the existence of "overstocking in Colorado," and never did, and agree that my own locality is overstocked at times. What I was after was that circle of four or five miles in diameter, of which by far the greater portion is barren prairie, which Mr. Carlzen still leaves us in the dark about. The wonder is not that 1,500 colonies overstock such an area, which of course they do, but

that their owners are still encouraged to keep them. "If a little alfalfa will do that," our Eastern friends may say, "it must be hard to overstock it completely—let's go to Colorado, quick."

At last accounts there seemed be but little foul brood in this county (Jefferson) this season. Last year there was considerable; year before last, a good deal. Jefferson county is probably fully stocked with bees throughout the irrigated portion.

In saying that would-be bee-keepers should be warned away, in a courteous manner, and without any thought of compulsion, from fields fully occupied or otherwise undesirable, I second Mr. Carlzen—always provided that a sharp distinction is drawn between this and the selfish and grasping policy of keeping them out of unoccupied fields, or partially occupied fields, where nectar is going to waste. It may be "business" to do so, to prevent honey from becoming plentiful and cheap, but that is all that be said for it. The prosperity of the country is worth more than that of a class of individuals.

There is another aspect of the question. Suppose a man who has say 20 colonies, with no other occupation than that of bee-keeping, and owning no land, lives in a region such as this, *i. e.*, where there seem to be enough bees to get all the forage except in good seasons. Shall he increase or not? That was my situation a few years ago, and virtually is yet, as I am still far from having 100 colonies of my own, though by working on shares I have been managing that number for the last three years. About two years after I started, a man who is not unknown to Mr. Carlzen asked me how many colonies I had. I told him. "That's enough!" said he. This man had 60 colonies, and was not within range of my bees.

It is as if a grocer were to solicit more orders. By so doing he does not increase the total market; he takes trade away from others; but no one thinks of suggesting that instead of making more money by enlarging his grocery trade, he either should go somewhere else, or run an upholstery attachment. If competition becomes too sharp, he will feel its bad effects himself as much as anybody.

In making a specialty of bee-keeping, I propose to keep on increasing until I have enough bees of my own to get along without running any on shares. In so doing I infringe on no one's rights, overstocking or no overstocking. Why? Because if I did not keep bees, I would do something else; and if I did something else, I would be crowding that other occupation just as much, or more than I am now crowding bee-keeping.

Therefore, granted that Mr. Carlzen is right about overstocking, I propose to keep on as I have been doing. But on second thought, I have observed no phenomena in this locality which I can unmistakably attribute to overstocking. Everything can be satisfactorily, and more reasonably, explained thus:

1st. The difference in seasons, as regards the flow of nectar. That this is considerable is shown by the great difference in yield between this year and last (not only here, but in other parts of Jefferson county), although there were more bees here then.

2nd. The weather. Many cold and wet spells during the first half of this summer hindered the bees from flying.

3rd. The stage at which alfalfa is cut. I have just been told by the man who cuts 320 acres immediately adjoining, that he commenced two weeks earlier this year than last, and that half the alfalfa this year was cut before it bloomed at all. Last year 80 acres in one place, and 40 in another, stood for seed. In general, the bees here do not get half a chance at it—no, not one-fourth of a chance. At Rocky Ford, Colo., where alfalfa seed is raised by the carload, one party averaged 150 pounds of comb honey per colony this season. The amount of nectar in each blossom is small; no matter how profuse the bloom, *time* is an important element in getting alfalfa honey. For all I know, while it *is* in bloom, even this locality might keep more bees busy than are now here.

I must take it back that I "agree" that this locality is overstocked. It may be. I don't know.

Arvada, Colo., Sept. 9.

The Alsike Clover Leaflet consists of 2 pages, with illustrations, showing the value of Alsike clover, and telling how to grow it. This Leaflet is just the thing to hand to every farmer in your neighborhood. Send to the Bee Journal office for a quantity of them, and see that they are distributed where they will do the most good. Prices, postpaid, are as follows: 50 for 25 cents; 100 for 40 cents; or 200 for 70 cents.

☞ See "Bee-Keeper's Guide" offer on page 691.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Hiving a Swarm Under the Parent Colony.

As soon as I have hived a swarm of bees, can I put the parent colony (in a bottomless hive) on top of the swarm? or would war follow? AMATEUR.

ANSWER.—If I understand you correctly, your scheme is to hive the swarm in an empty hive and then set the old hive on top of the swarm, allowing free passage from one hive to the other. There would be no war, but the bees would occupy the old hive just as before, and probably swarm out again the next day.

When to Transfer from Box-Hives.

I have 3 colonies of bees in dry-goods boxes. They were hived in them in August. How can I put them in hives? When is the best time to do it? They have over 100 pounds of honey each, and some in nice straight comb. This is my first year. I had 2 colonies in the spring, and now I have 19.

Glen Flora, Wis., Oct. 7. J. H.

ANSWER.—Better leave them where they are till next spring during fruit-bloom. At that time you can transfer them according to the directions given in your bee-book, or perhaps you will do better to let them alone till they swarm, then transfer afterward. At any rate, leave them where they are now, study up on the matter between now and next spring, and then if there's anything you don't understand about the case feel free to ask all the questions you like.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Spacing Devices.—"I want spacing devices to be part and parcel of the frames themselves. They are a mistake when made detachable in the way of sticks or when a part of the hive-body itself."—Editoral note in Gleanings.

I would be glad if Friend Root would explain *why* he wants spacing devices to be a part of the frames themselves. Also, why they are a mistake when a part of the hive-body. It seems to me that there are some very good reasons why they should be a part of the hive-body, and that it is a mistake to make them a part of the frames, but I will not give my reasons until I hear the why of the other side.

Not Consanguinity.—"Sir Henry Sumner Maine, in his 'Lectures on the Early History of Institutions,' has shown with admirable force and suggestiveness that rude and savage tribes uniformly regard consanguinity as the only basis of friendship and moral obligation, and the sole cement of society. The original human horde was held together by the same tie of blood-relationship that produces and preserves the consciousness of unity in the animal herd, or causes ants and bees to lead an orderly and mutually helpful life in swarms. In all these communities the outsider is looked upon as an outlaw; whoever is not a kinsman is a foe, and may be assailed, despoiled, enslaved, or slain with impunity. Indeed it is considered not only a right but also an imperative duty to injure the alien by putting him to death or reducing him to servitude. The instinct of self-preservation asserts itself in this form with gregarious mammals and insects; and all primitive associations of men are founded upon this principle and cohere by force of this attraction."—Prof. E. P. Evans, in the Popular Science Monthly.

It is strange that a man of Prof. Evans' reputed ability should make such blunders as he does whenever he refers to bees. The most ignorant practical bee-keeper in the land would laugh at his idea that it is the "tie of blood-relationship that causes ants and bees to lead an orderly and a mutually helpful life in swarms." A swarm of bees have no more re-

gard for the "tie of blood-relationship" than they do for the spots on the sun. It is a common interest and purpose which holds these communities together, and not consanguinity. It is not true that "in all these communities the outsider is looked upon as an outlaw," and "whoever is not a kinsman is a foe." Every intelligent bee-keeper knows that the bees pay no attention to kinship. They would reject their own mother after she had been absent from the hive for a few days, as quickly as they would any other queen, even though she belongs to a different race or variety of bees. Those who have both Germans and Italians frequently see demonstrations of the fact that they pay no attention to kinship; for during the busy season of the year, especially if the hives are close together, the worker-bees of the various colonies become almost "commoners," and a bee with a well-filled honey-sac, and an overflowing pollen-basket, will not be repelled, if she should make a mistake and enter the wrong hive, as is frequently the case under these circumstances. So, it comes to pass that Italians are often found among the bees of neighboring black colonies, having entered the hive by mistake when coming home from a successful trip of pollen and honey gathering. Kinship has nothing to do with letting them in, or driving them out.

Then, what bee-keeper has not seen black and Italian swarms that happened to be in the air at the same time unite, to the disgust of their owner, and pile upon the limb of some tree with the utmost disregard of consanguinity, or even "race prejudice?" I would advise Prof. Evans not to go to the bee-hive when he wants to point a moral or clinch an argument, at least until he is better posted on the actual facts as to what bees do, and do not do. On general principles, I think it would be a good plan for all scientific investigators and writers to cease going to Virgil, Huber, and other antiquated authors for information about bees, and get a few colonies and learn the facts at first-hand. They will then save themselves from making many a blunder, and at times from doing this growing and important industry a great injustice.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

Wintering—Foundation—Transferring.

DR. BROWN:—1. Do you find it necessary to make preparation for wintering bees, such as cellaring, chaff hives, etc., in this climate?

2. I notice in the "A B C of Bee-Culture," and in the bee-journals, this expression: "Just before you expect the honey-flows." When are those times in Arkansas?

3. I have 6 colonies in box-hives which I will transfer in the spring to dovetail hives. When should I order brood foundation?

4. How long can I keep foundation fresh? How is it done?

5. If I transfer in the spring, can I expect any surplus next season?

6. Should I use the Heddon short way of transferring, how long should I drum on the sides of the box-hive in order to get the bees up into the "hiving-box"—one minute, 5, 10, or 60 minutes?

7. If within 21 days a new queen is found in the old hive, what then?

8. I will Italianize next July or August, by getting enough tested queens to go around. Will this plan keep my apiary pure, barring an accident? For how long?

Lamar, Ark. C. S. R.

ANSWERS.—1. It is not necessary at all. Only see that your bees have plenty of stores, from 20 to 25 pounds of honey per colony.

2. What is understood by the expression "honey-flow," is the time of the opening of those flowers that have the reputation of yielding honey in liberal quantity. From April 1 to the middle of June would embrace the bulk of the bloom contributing to the spring honey harvest in your State. The fall honey-flow would be say from Sept. 1 till frost.

3 and 4. Order it in time for your transfers. You can keep foundation indefinitely if you place it in a tight box and exclude the wax-moth. Before using, lay the foundation in the sun for a few minutes, and it will be as acceptable to the bees as if just made.

5. If you make your transfers *early*, say in February or the first of March, you can secure a crop of surplus if there is any honey to gather. When you transfer early, before there is any honey to gather, you must place back the honey, or feed until the bees can gather from natural sources.

6. In case you used this method of transferring, your hives should be populous in bees before making it. The length of time to "drum" would depend much upon the strength of the colony, and the temperature. If the air should be cold, you would have to drum longer. When the conditions are all right, five minutes is long enough—at other times it might be necessary to use smoke to hurry the bees up.

7. If you can replace her with an Italian queen, pinch her head; if you cannot, then retain her until you can do better.

8. The length of time will depend upon the number of black bees around you. Your trouble would be with your young queens, but if you should use care in controlling your drones and queens, you might expect the larger number purely fertilized.

The Bee-Martin or Kingbird.

I see a good article on page 553, from T. S. Ford, of Mississippi, in behalf of the king-bird. But I cannot agree with him. There was a nest of bee-martins near my bees, and when the young ones could fly they came close to the hives and sat on the trees, and the old ones caught bees for them to eat. I did not bother them for awhile, but I found that I was losing a large per cent. of my young queens, so with my shot-gun I killed a portion of them, and the balance left, and I have not lost any of my young queens since. If Mr. Ford will send his bee-martins this way, I will kill them, too. A. P. LAKE.

Batesburg, S. C.

Sawdust Packing—Apple-Juice—Drones for Mating.

DR. BROWN:—1. Would it pay, where sawdust is handy, to make an outside box and set over a hive, leaving about two inches of space, and filling with sawdust for winter, making a kind of a chaff-hive?

2. Do bees gather anything from green apples? We are drying, and they are so bad that at times we have to abandon the work?

3. Should the drones be allowed to remain in the hives until the bees kill them, or should we catch them, leaving those of one or more colonies to mate with the queens?

Mayking, Ky. J. J. W.

ANSWERS.—1. I would not advise sawdust. It is notorious for developing fungus. Dry leaves would be better. I think it would hardly pay to give outside protection if your colonies are strong, with plenty of stores. Still, you might try a chaff-hive or an outside box.

2. All they gather is a little apple-juice. In seasons of scarcity they will work on many things they would not if the flowers were yielding honey.

3. Better select the drones for mating, and destroy the others.

Bee-Keeping in Virginia.

The honey crop this year will be about half. Dry weather during May and June caused a failure in white clover, which generally blooms throughout May, June, and a portion of July. My bees have stored from 25 to 50 pounds per colony from basswood, sourwood, and small plants. We have but a small quantity of basswood in our part of the country.

Bees are almost idle here during August. Some times we have honey-dew. I would like some one to suggest plants which yield honey during August. I expect a good yield from white aster, which blooms during September.

A number of "cranky" farmers here still keep black bees in box-hives. F. C. EWING.

Cany Hollow, Lee Co., Va., Sept. 16.

Every Present Subscriber of the Bee Journal should be an agent for it, and get all others possible to subscribe for it. See offers on page 690.

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George W. York, - - Editor.

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Editorial Budget.

Rev. E. T. Abbott, of St. Joseph, Mo., visited the Bee Journal office last Saturday. He was on a business trip through the States of Wisconsin, Illinois and Missouri.

That St. Joseph Convention Report.—On page 677 will be found the final action taken at Toronto concerning the delayed Report of the St. Joseph convention of last year. After a most thorough private examination by a very competent committee, the blame is fixed, and ex-Secretary Benton has his choice, either to refund the $25 paid him, turn over the balance of the Report, or receive the censure voted him by the Toronto convention.

Full of Mistakes.—The long essay by Mr. Allen Pringle, on pages 677, 678 and 679, probably contains more "mistakes" than anything written very recently. This is no reflection upon Mr. Pringle—it is a fact, but Mr. P. is not at all to blame for the mistakes. He has done a good work in pointing out errors of various kinds which have been, and are, committed daily by both bee-keepers and bee-editors.

I want to urge all to read Mr. Pringle's essay, even if it is somewhat long. I have read it just four times, and heard it read one time—at Toronto. And I have not changed my opinion, expressed at the convention, that Mr. Pringle's essay was one of the very best read at the meeting. It is of particular interest to those who are somewhat new in the bee-business. Read it—and then heed it.

Honey-Plant Information.—If you know of any plant that is a good honey-yielder, I shall be glad to have you report it, telling about its time and duration of blooming, how to grow it, and, in fact, everything you know about it. Such information would be valuable to all, and I would be pleased to publish it. We cannot know too much about honey-yielding plants, and if every bee-keeper would sow some self-seeding, honey-producing plants each year, in a few years the sources of honey would be greatly increased. No doubt many could easily get permission to sow on their neighbors' waste land or pastures. If so, that would be a great advantage.

Then, in addition to the above, don't forget to set out trees that yield honey, such as basswood, honey-locust, etc. Unless there are blossoms for the bees to work on, they can't be expected to fill their hives with honey. Do all in your power to furnish the right kind of bloom, and the bees will do their part, providing the weather and season are favorable.

For the New North American.—While lying on my bed several weeks ago, suffering from a severe attack of tonsilitis, I fell to thinking about some of the things that possibly the new society could undertake, and which I believe would serve as an inducement to membership. One of them is this:

It could employ say four of its members to conduct experiments in the interest of bee-keeping. I would have one in the East—say Mr. Doolittle, of New York; for the South, Dr. Brown, of Georgia; for the West, Prof. Cook, of California; and for the North, Mr. Holtermann, of Canada. These would not interfere with any State apiarian experiment stations, but could co-operate. Before the season opens I would have all agree to conduct the same experiments, and then all report upon them at the end of the season. Or, perhaps some of them could be completed before the end of the season, and such could be reported upon sooner in the bee-papers.

I think that four such experiment apiaries could be secured at very reasonable expense, and every member would be exceedingly interested therein. You know every person values more highly something he knows he has actually paid for. One reason, I think, why State experiment stations and apiaries are less appreciated than they ought to be, is because no individual farmer or bee-keeper has directly contributed anything to defray their expense. What is actually paid for is often appreciated much more than an apparent gift.

I would have the reports prepared by the four experimenters published with the report of the proceedings of the annual convention. This would help to make it a valuable pamphlet.

Again, at the annual meeting might be a good place to decide upon the particular line of experiments to be conducted the following season. By having State and Provincial representatives present at the annual meeting, ought to make it a fairly authoritative body—sufficiently so that they could definitely outline the work for the succeeding year.

Please do not understand me to mean that this work is in any way to be a substitute for State or Provincial experiment apiaries. Not at all. My thought is, that after getting these started, it will be easier to interest State and Provincial legislatures in our behalf.

Now, I have given here, and in a previous number, a few suggestions for the new society, if such be formed. What have others to say, either as to the practicability of my suggestions, or regarding their own thoughts along the same line—that of making the North American more effective and helpful?

Opinions Differ very much concerning the Toronto convention. While I do not think it equalled either of the two preceding conventions, still I'm not prepared to say, as has one bee-editor who was present, that I consider my "time and money little less than thrown away," and I believe it cost me about as much as it did any one, and quite a good deal more than the critic above-mentioned.

I was greatly surprised that but a few (probably half) of those present failed to pay their annual dues. The list of members, as published in the report, makes a small showing. I think probably I enjoyed the meeting more because of having paid my dollar. I cannot understand how any one can feel satisfied to attend a convention of the North American and not contribute toward paying its expenses. But opinions differ.

Mr. R. B. Leahy, of the Leahy Mfg. Co., of Higginsville, Mo., and publishers of the Progressive Bee-Keeper, called at the Bee Journal office Monday, Oct. 14. I had met Mr. Leahy at the St. Joseph convention in 1894, but for a few minutes only. He reported a fairly good year's trade, and a hopeful outlook

Langstroth Resolutions.—I believe the Southwestern Wisconsin Bee-Keepers' Association has the honor of having been the first bee-society to pass resolutions of respect to the memory of Father Langstroth. On Oct. 15 I received the following:

While the Southwestern Wisconsin Bee-Keepers' Association was in session, Oct. 8, in Platteville, the sad news of the death of Rev. L. L. Langstroth, in his 85th year, was received. Therefore, be it

Resolved, That this Association deplores the loss of Father Langstroth, who died at his post of duty, while preaching gospel truths;

Resolved, That his life has ever been an example of study, thought and deed;

Resolved, That by his invention of the most practical movable-frame hive, in 1851; and the writing of his book—"The Hive and Honey-Bee"—in 1852, Mr. Langstroth laid the foundation of American apiculture;

Resolved, That a copy of these resolutions be published in the American Bee Journal and Gleanings in Bee-Culture.

N. E. FRANCE, *Pres.* M. M. RICE, *Sec.*

The officers elected for the ensuing year are as follows: President, N. E. France, of Platteville; Vice-President, H. Lathrop, of Browntown; Secretary, M. M. Rice, of Boscobel; and Treasurer, J. W. Van Allen, of Barnum.

First premiums were awarded on the following exhibits:

On Root's Crane Smoker, to N. E. France.

On Comb Honey, Williams' Automatic Reversible Honey-Extractor, Bingham Uncapping-Knife, and Sample of Extracted Basswood Honey, to J. W. Van Allen.

On Italian bees, to J. McLain.

On Carniolan bees, Root Foundation Mill, Comb Foundation, a Cake of Yellow Beeswax, and Clover Honey 18 years old, to E. France & Son.

The next meeting will be held in Wauzeka, Wis., Oct. 10, 1896. M. M. RICE, *Sec.*

The following was received from Mr. R. H. Whitfield, of Meridian, Miss., dated Oct. 10, 1895:

I regret to learn of the death of good old "Father Langstroth," although he had passed the allotted time. "Died in the Harness," should be inscribed on his monument. The Christian church platform, filled by a consecrated man like Rev. Langstroth, is a satellite of the celestial throne, and is only a step to the right hand of God. He was thus as near the shore of that "beautiful river" as is given the lot of man to be in this life, when the spirit took its flight.

R. H. WHITFIELD.

Among the Bee-Papers

Gleaned by Dr. Miller.

A GOOD THREE YEARS' WORK.

In 1892 a friend of mine bought 20 colonies of Italian bees at a cost of $70, and a few supplies, and commenced bee-keeping in earnest. In 1892 he sold $5 worth of honey in the comb, and kept 100 pounds for home use, increasing his bees to 60 colonies. In 1893, from 60 colonies, spring count, he sold $447.50 worth of honey, and increased to 90 colonies. In 1894 he sold $180 worth of honey. As it was one of the worst honey seasons we have ever had in southern Indiana, I think for a beginner he did extremely well, selling in three years $667.50 worth of honey, increasing from 20 colonies the first year to 90 the third year. If anyone can invest the same amount in farming, and get as good returns in three years as Mr. T. E. Johnson did from his bees, they have found a new and short cut in farming.—E. W. MOORE, in Progressive Bee-Keeper.

VENTILATION IN SUMMER.

Ventilating is, I believe, one of the points in bee-keeping that is not understood and given the attention it should be given. My plan for ventilating my bees is as follows: Slip the hive back on the bottom-board two inches. I then have 1¼ inches of an opening at the back of the hive directly under the brood, and for top ventilating I raise the cover and slip it back until the end-piece on the cover-rests on the top of the hive. This makes an opening on top of the hive of about one-fourth of an inch in front, sloping back to the rear, giving ventilation all through the hive.

But I hear someone saying, "I can't slip my hives back on the bottom-boards, as they are nailed fast." Well, then, can't you loosen them? If not, get a few dovetailed hives and try them, and see how nicely it will work on them.—E. W. MOORE, in Progressive.

THE NEW PRESIDENT OF THE NORTH AMERICAN.

And so the North American Bee-Keepers' Association is to have that banner bee-man, A. I. Root, in the chair? Surely, the convention will have to be held some place where green-houses were never dreamed of, or where there's sure to be no counter attraction, either natural or artificial. I believe I already want to go, if only to see how uneasily confinement sits upon him. It is a pretty good practical joke on him, and while he is pinned down to business, you can depend on some of the others in attendance playing *his* usual role—that of playing truant at the least opportunity, and having a good time generally.—Somnambulist, in Progressive.

WHY DON'T FLOWERS YIELD NECTAR?

There is certainly something about the weather and atmospheric conditions with regard to nectar-secretion that we do not understand. I have read somewhere that warm, sultry weather was conducive to nectar-secretion, and then it seems to me I have read from another source that warm, dry weather would bring about the result that bee-keepers rejoice to see. Is there not here an unexplored field? Is it not possible to learn under what conditions of the atmosphere flowers do or do not secrete nectar?—S. E. MILLER, in Progressive.

Well, and suppose you do find out just the right conditions for nectar-yielding, what are you going to do about it? What can you do to change the conditions of the atmosphere?

FEEDING BACK TO GET SECTIONS FINISHED.

I kept a strict account of all fed them, and of all that was completed by them, which I give below, and anyone that chooses can figure out whether I made anything by it or not. If one has time on his hands and plenty of drawn sections (or sections with drawn combs or partly-filled combs), and plenty of cheap extracted honey, it may pay; otherwise, *decidedly not.*

Number of pounds of honey fed..... 1,250.
Number of pounds capped honey..... 680.

Of course the colonies used have their hives chock-full of honey for winter, much more than they will really need; and as there were originally 10 of them, and all have at least 30 pounds each of honey, that should be taken into account when the balance sheet is made.—E. T. FLANAGAN, in Progressive.

HORTICULTURE AND MEDICINE.

In Progressive, Somnambulist thus refers to the attempt to introduce a horticultural department in the "Old Reliable:"

On page 590 of the American Bee Journal, E. T. Abbott has an article on "How to Make the Garden Pay," but he falls into moralizing and leaves practical gardening in the rear.

Then by an easy transition, Somnambulist proceeds to introduce a medical department after this fashion:

For instance, salsify is recommended for biliousness; carrots and parsley are powerful diuretics; spinach acts directly on the kidneys (now is the time to get in the seed for next spring's supply); the common dandelion and nettle, used as greens, are excellent for any such trouble; asparagus and sea-kale enliven the blood and keep it pure; celery acts admirably on the nervous system, and cures rheumatism and neuralgia; beets, turnips, and cabbage are excellent appetizers and blood cleansers; lettuce and cucumbers are cooling in their effect on the system, eaten either cooked or raw, and lettuce is said to effectually cure jaundice; onions, garlic, leeks, and shallots all possess medical virtues of a marked character, stimulating the circulatory system, consequently increasing the saliva and gastric juice, thus promoting digestion; red onions are an excellent diuretic, and white ones eaten raw are a fine remedy for insomnia; they are a tonic and nutritious; a soup made from them restores strength to debilitated digestive organs; peas, beans, carrots, and parsnips are very nutritious and fattening; water-cress, endive, salsify, mustard, and the tomato are perfect liver regulators; grapes are almost equal to quinine for malarial troubles—but then they are a "cure-all" for many unpleasant feelings; a

cabbage leaf put inside the hat will keep the head cool and easy beneath the influence of a burning sun; pineapple relieves sore throat, while the lemon—

And so on in a less condensed fashion for nearly a page more.

Canadian Beedom.

Clipping Queens' Wings.

On page 599, "What Dr. Miller Thinks" on the above subject is set forth in an article from which I quote the first paragraph, as it embodies a question put to me direct, which courtesy as well as interest in the subject requires me to answer so far as I can:

"The point made is that clipping deprives queens of the power of flight, and that organs not used are likely to deteriorate. See page 569, first paragraph. I did admit, and do admit, my Canadian friend, the two points you make, but I don't see the close connection between them that you seem to think you see. If it were true that clipping deprives queens of much flight that they would make if unclipped, then it might be worth while to talk about deterioration. On page 519, I referred to cases in which the queen never flies after her wedding-flight. Now will you kindly answer this question: If a queen is clipped, and lives two or three years thereafter, is there any more deterioration than if she lived those two or three years with whole wings, and never during that time made the attempt to fly?"

My first impulse on reading this query was to reply in the phrase on which Dr. Miller has a kind of mortgage—"I don't know." But although this is one way of getting out of a difficulty, it is not so satisfactory to an enquiring mind as probing a thing to the very bottom. After much reflection on the Doctor's question, I feel disposed to answer it by another, namely, How does the queen manage to retain her power of flight, year in and year out, so as to be ready at any time to swarm and fly as fast and as far as any of her subjects? I am inclined to think that in the case of an unclipped queen there is a constant, or at any rate, a frequent exercise of the muscles of flight, as the result of which her majesty is always in flying trim. In the case of the workers there is, even inside the hive, a constant movement of the wings, similar to that made in flight. They are active, restless little creatures, and are seldom in a state at all bordering on repose. The queen may also be noticed making wing-movements from time to time, and probably she makes these movements frequently enough to keep the organs of flight in a fit form for use at any time.

Now if the above theory is correct, clipping may have a much more serious effect than the Doctor is ready to admit. He agrees with me in regard to the principle that disuse causes deterioration, but thinks that clipping does not cause disuse, at least that it has very little effect in that direction. But if my idea is correct, that there is a constant exercise of the wing muscles in the case of unclipped queens, may he not be mistaken in thinking that clipping has very little effect in causing disuse? So soon as the clipped queen finds out that she has been deprived of a portion of her organs of flight, and on trying to plume her wings, finds how awkward and difficult it is to spread them, there being nothing to spread where the scissors have done their work, will she not naturally quit making the abortive attempt? In other words, will there not be disuse of the organs of flight?

If we could suppose a queen keeping her wings perfectly still from one swarming-period to another, would she, after a year's disuse, be as well able to "spread her wings and fly" as though she had kept up the constant, or at any rate, frequent exercise of the muscles of flight to which I have referred? If a strong, healthy man were to tie his right arm in a sling for a twelve-month, how much muscle-power would he have at the end of that time?

Nature is a wonderful economist. As soon as an organ or function is labelled "not wanted," she begins to withdraw nutriment and vigor from the place where they are not needed, that she may the more abundantly supply them where there is use for them. Nature permits no waste of resources that can be avoided. She is always arranging her forces so as to keep all employed as busily as possible. She does not allow any of them to be standing all the day idle. If there is no use for them in one direction she will send them in another. So I suppose that when the poor, disabled queen, for which I always feel a degree of pity, finds that she has only half her wing-power left to her, and that it is awkward to swing it without its mate, she quits putting her wing machinery in motion, and it falls into disuse. According to the natural law which Dr. Miller accepts, disuse brings deterioration, and it has only to be continued long enough to result in extirpation. When there is no longer any call for wings, Nature will cease to produce them.

The Doctor says if I am correct in my views, the matter is a very important one and deserves serious consideration. He accepts the natural law from which I have deduced my theory, and I hope that he and others will give the matter the serious consideration to which it is entitled.

We cannot be too careful to do nothing that will in any way cause our queens to degenerate, or lessen their efficiency and vigor. If my views are correct, it might be possible in course of time to get rid of swarming by developing a race of wingless queens, but does Dr. Miller or any one else suppose this could be done without injury to the workers? Wingless queens, if they could be produced, would be certain to rear workers deficient in wing-power. The danger in this direction is not wholly imaginary. Dr. Miller thinks that clipping has very little if any effect in the direction I have pointed out. Suppose it has *a* little effect, and that little goes on multiplying and increasing, what will it be in the long run?

There is a great deal said and written in the Old World about the necessity of maintaining the balance of power among the nations of Europe. To illustrate a small thing by a great thing, may it not be necessary in order to the best development of a queen-bee, to preserve the balance of power in her physical conformation and development? Can her wing-power be lessened without diminution of her general vigor? I make no assertion that this is so. I only suggest that it may be, and submit it as a question worthy to be considered. I think the infinitely wise Creator knew what organs and functions it was best to give a queen-bee, and that it is rather presumptuous for man to say, in effect, this little creature would be improved by being deprived of her wings, or at any rate, of the power to use them.

There is another extract from Dr. Miller's article, to which I would call attention. He says:

"At the time of fecundation the young queen makes several flights, circles about and marks the location, her flights lasting perhaps from three to 15 minutes. In all, she probably flies several miles before commencing to lay. Then she is clipped, and loses the flights she would make in swarming the two following years. How much does that amount to? She flies to a point perhaps five rods distant from her hive each time. Of course, she flies more than the five rods, for she circles about and hovers in the air, but I suspect it is making full allowance to say that the average unclipped queen does not fly after she commences to lay, more than one-tenth as much as she does before commencing to lay."

These flights which the queen-bee is described as making at the time of fecundation, are doubtless intended in the order of Nature to develop her wing-power, and prepare her for whatever demand may be made on her flying functions during her future history. I suppose that the exercise of her wing-muscles kept up inside the hive at intervals maintains her power of flight so that she can put forth when it is necessary to do so at swarming-time. Clipping prevents her going off with the swarm, but it also prevents the exercise of the muscles of flight by which she would be qualified to take wing when the swarm issues.

Dr. Miller thinks the average unclipped queen does not fly after she commences to lay, more than one-tenth as much as she does before commencing to lay. He may be quite correct, as a matter of fact, but I venture to think the unclipped queen goes through the motions, and exercises her wing-power so as to keep it up to the normal pitch it attained by practice at the time of fecundation.

After the Doctor has inwardly digested the foregoing suggestions, his "Canadian friend" would like to hear from him again.

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General Items.

Bee-Keepers' Pudding.

Take as many fully ripe apples as necessary for the family; polish them with a dry cloth (do not wash them); for this I like best the coarser-fleshed varieties, such as Chandler (I prefer), King of Tompkins Co., etc., but the various pippins, Rhode Island greening, Baldwin, and others are good enough. Remove the core thoroughly nearly to the eye, which leave; fill this cavity with a teaspoonful of extracted honey, and a lump of butter the size of an acorn. Then bake until the skin is fully brown.

This needs no sauce, and if you pare the apples you destroy the flavor.

Beaver, Pa. WM. S. BARCLAY.

Bees and Cotton-Bloom Again.

I noticed an item on page 576, on bees and cotton-bloom, where Mr. J. J. Keith differs from Dr. Brown on the cotton-bloom question. Mr. K. says he has never seen (nor has any one whom he has asked) a honey-bee on a cotton-bloom. I am afraid that he is a little wrong on this subject, when he, or any one else, says that bees don't work on cotton-bloom. I have noticed the cotton-bloom for three years, and I have never failed to find bees at work on it at all hours of the day, from the time it comes into bloom until frost kills it down; and it furnishes the whitest honey that we get in this part of the country. In fact, when it is extracted, it is as clear as crystal, and when stored in the sections it is snow white, and has a very mild and delicate flavor. But the great trouble with the cotton-plant as a honey-source is that the hot sun evaporates the nectar before the bees can gather it, for it only furnishes honey in paying quantities from 6 to 10 p. m., and this applies only to September and October. JNO. M. WHITLEY.

Creedmore, Tex.

Common Motherwort.

I send a specimen of a plant I found growing in a mill pond, upon which the Bees seemed to be swarming nearly all day long. It was in the latter part of July, or the first of August, that I noticed the plant, and probably I would not then had it not been for the roar of the bees at work on it. It seems to be full of bloom from bottom to top. The bloom seems to be of a purple color, and star-shaped.

(REV.) L. ALLEN.

Loyal, Wis., Oct. 2

It is *Leonurus Cardiaca*—common motherwort. This is a plant found usually in waste places, and comes to this country from Europe. Prof. Cook says this about motherwort, in his "Bee-Keepers' Guide:"

"Very few of our native plants afford so much nectar, are such favorites with the bees, and are so independent of weather as motherwort. It is crowded with bees from the dawn of its bloom till the last flower withers. By cutting it back in May, it can be made to blossom just at the dearth of nectar-secreting bloom; otherwise it comes in June and early in July, just when linden is yielding its precious harvest. Few plants are more desirable to sow in waste-places."

Fetid Marigold.

I send specimen of plant which grows in my pasture. I would like to know its name, and if it is a bee-plant, and its medicinal properties. JAMES N. GUNN.

Wall Lake, Iowa, Oct. 1.

[It is *Dysodia chrysanthemoides*—fetid marigold. It is a strong scented composite plant, found occasionally along railroads and roadsides. I have not been able to learn as to its value as a honey-plant or medicinally. Who knows?—EDITOR.]

Small Crop of Honey.

I am a farmer, and have an apiary of 35 colonies of bees. We have had four poor bee-seasons, but this year I got 1,000 pounds of honey—a small crop for 35 colonies.

I find the Bee Journal a great help in managing the bees. ALVIN VROOMAN.

Sharon, N. Y.

Results of the Past Season.

I opened the season with 22 colonies in 8-frame Langstroth hives; worked entirely for section honey, and as a result I have taken a little more than 1,500 pounds, and have now 46 colonies with the hives full of good honey, and strong in bees.

Basswood failed here. White clover yielded some honey. The principal part of mine came from the aster, which makes a very white honey here. I let my bees swarm once, and set the new swarm on the old stand, generally, but not being on hand all the time two swarms doubled on me.

I don't bother my bees much during the honey-flow. I see that they are supplied with sections when needed, but that is about all.

One of my colonies commenced storing surplus honey from dandelions, and stored some over 100 pounds of that and clover honey before it swarmed. After swarming it stored 50 pounds, and the young swarm from it stored 70 pounds, besides plenty to winter on.

This was a much better year than last year, but we lose a large share of our crop when basswood fails. L. M. WILLIS.

Loyal, Wis., Oct. 14.

Report for the Season—Paralysis.

My report for the year of 1895 is as follows: I began in the spring with 24 colonies, had two natural swarms, and made two or three colonies by dividing. I got 915 pounds of honey, 24 pounds being comb honey in one-pound sections. But my bees decreased rather than increased during the summer. I have now 22 colonies, strong in bees, and well supplied with honey.

For several years paralysis has been among my bees, and has steadily increased in severity, so that last spring I had but three or four colonies left, that were free

from it, or nearly so—yes, and what is worse, for four years some of those colonies most affected with paralysis seemed to run into what appeared to be foul brood; it showed all the marks of the disease, except that it was odorless—at least I could discover none. The first outside indication that I could discover was a yellowish larva at the entrance. The bees would run against it, examine, and leave it. as if afraid to touch it. It would thus lie there for nearly half a day before the bees would remove it. The colonies were generally reduced in numbers, most of them queenless, and some with laying-workers in the hives.

I lost two colonies in 1892, one in 1893, one or two in 1894, and one last summer. It would appear during the warmest part of the summer, about July. This put me at a disadvantage to get rid of the disease, for I work my bees chiefly for extracted honey, and would therefore not discover anything wrong until I had extracted the early honey, and had exchanged combs with other colonies.

I applied the most radical cure I could think of (the brimstone match), and then buried bees, honey, combs, and all, and I consider the above remedy the best cure for paralysis, also. I have tried it, but did not destroy the combs. FRED BECHLY.

Searsboro, Iowa, Oct. 6.

Exhibits and Premiums at a Fair.

Our Lebanon Fair was held Aug. 20 to 24, and premiums for the exhibits of bees, honey, etc., were awarded as follows: Imported queen-bee, John V. Emmert, 1st. Best queen-bee and best display of queens, John V. Emmert, 1st. Comb honey, 10 pounds, Mrs. S. H. Lane, 1st. Extracted honey, 10 pounds, John V. Emmert, 1st. Display of honey, Mrs. S. H. Lane, 1st; John V. Emmert, 2nd. Comb foundation for comb honey, J. W. Henderson, 1st. Display of beeswax, Mrs. S. H. Lane, 1st. Best collection of pressed honey-plants, Mrs. S. H. Lane. 1st; John V. Emmert. 2nd. Display of apiarian supplies, John V. Emmert, 1st. Gallon of honey-vinegar, John V. Emmert. 1st. JOHN V. EMMERT.

Lebanon, Ind.

Had a Very Good Crop.

I had a very good honey crop this year. My spring count was 71 colonies. I extracted from 94 colonies, and got 11½ tons of honey, which I sold for 4 cents per pound. Last year was a failure here in Riverside county. PRICE LAYTON.

Declezville, Calif., Oct. 12.

A Handy Smoker Hook.

I hang the smoker on windward side of the hive, and thus have a little smoke just where I want it while I am handling the frames. To do this I use a piece of wire (about No 16) long enough to go three or four times around the barrel. I put this twice around the barrel just behind the front legs that hold the barrel from the bellows, drawing it as tight as possible; I give the ends two or three turns, and press the thus twisted part down to the barrel toward the nozzle. Now turn them right and left, then ½ inch from the twist turn them up, or from the smoker, then one inch from the last turn turn again down, or from the nozzle. Now file and break off ¼ inch from this last turn, and you have a double hook by which to hang the smoker where you want it.

Of course if I were manufacturing smokers I would rivet a convenient hook to the barrel.

The above gave me such entire satisfaction that I had half a notion to apply for a patent. L. DICKERSON.

Denison, Tex.

Death from a Bee-Sting, Etc.

An uncommon thing occurred a few days ago. One of Geo. W. Holbrook's little children was stung on the end of the tongue, from which death soon followed. The tongue swelled until the child could get no breath, and could not be stopped or lessened until too late.

Bees have done no good on fall bloom. Our best honey-flow was from linden. Success to the "Old Bee Journal." JAMES J. WEBB.

Mayking, Ky., Oct 7.

A Good Report from Texas.

I started in the spring with 40 colonies of hybrid bees in fair condition, in single-story Simplicity hives, but having favorable weather I succeeded in building them up for the main honey-flow, which commenced the first of April and continued until the last of April. I increased to 55 colonies, and I worked them in two-story Simplicity hives—40 colonies for extracted honey, and 15 for comb honey. I extracted 5,000 pounds of first-class honey, and took 900 pounds of nice white comb honey. My bees are in splendid condition now, with plenty of stores, and are still storing more than a living. The hives are boiling over with bees. W. F. KONICKY.

Brackettville, Tex., Oct. 27.

Bees Ready for Winter.

I like the "Old Reliable" very much. I started in the spring with 8 colonies. 2 of them weak, increased to 14, and obtained 468 pounds of comb honey. My colonies are all strong in bees, and the hives full of honey for winter. J. C. BOOERT.

Exchange, Pa., Oct. 12.

Successful Management of Swarms.

The freezing in the spring killed the blackberry bushes and all flowers so that my bees came nearly starving. The swarms came so late that their wintering would have been doubtful if hived separately. I put three and four prime swarms into each hive, and placed two and three tiers of sections on top at the time of hiving, using a trap for the queens. Each swarm filled its hive-body with honey, and nearly each one filled the two tiers of sections. Unite and get honey; separate and "get left." G. H. BOYD,

Gallagher, Pa., Oct. 4.

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Honey & Beeswax Market Quotations.

CHICAGO, ILL., Oct. 16.—We never had as good inquiry for honey as this fall, and never sold as much. We have not received as good prices owing to the amount of California stock unloaded on this market, which was sold at a very low price, both comb and extracted. We quote: No. 1 and fancy, 13@15c.; amber and dark, 8½@11c. Extracted, 5@7c. Beeswax, 28c. J. A. L.

BUFFAALO, N. Y., Oct. 14.—Honey is in good demand. We quote: Faucy, mostly 16c.; choice, 14@15c.; buckwheat sells slowly at 10@12c. Extracted very quiet. Will advance liberally upon all choice shipments of honey. Beeswax wanted at 28@30c. B. & CO.

CHICAGO, ILL., Oct. 14.—There is more activity in the comb market, with prices of 15c. for fancy; other grades in proportion. Extracted dull, ranging 4½@7c., according to quality. Beeswax, 27@30c. R. A. B. & Co.

CHICAGO, ILL., Oct. 19.—We quote: Fancy white comb, 1-lbs., 14c; No. 1 white, 13c.; amber, 12@12½c.; buckwheat, 10c. Extracted, as to quality and style of package, 5@6½c. Beeswax, 30c. S. T. F. & Co.

KANSAS CITY, Mo., Oct. 4.—The demand for comb is fair, with a fair supply; extracted in light demand. We quote: No. 1 white, 1-lbs., 13@14c.; No. 2, 12@13c.; No. 1 amber, 11@12c; No. 2, 8@10c. Extracted, white, 6@6½c.; amber, 5@5½c.; dark, 4½c. Beeswax, 20@21c. C. C. C. & Co.

PHILADELPHIA, PA., Aug. 19.—New crop of comb honey is coming in more freely and generally in good condition. Demand is now beginning to spring up. New extracted is arriving in a small way. We quote: Fancy comb, 14@15c.; good, 13c.; fair, 9@11c. Extracted, 4½@5½c. It is hard to get our market to rally after the blow it received in the spring on discovering such a large amount of beeswax adulterated. We quote pure wax, 22@25c. W. A. S.

ALBANY, N. Y., Oct. 7.—Receipts of honey, as well as demand, have increased some, and the weather being cooler I think this month and for part of next, as usual, will be the best time to market honey. We quote: White comb, 14@15c.; mixed, 12@13c; dark, 10@12c. Extracted, white, 6½@7½c.; mixed, 6@6½c.; buckwheat, 5@5½c. H. R. W.

CINCINNATI, OHIO, Oct. 9.—There is a good demand for choice white comb honey, at 14@16c.; dark grades found a ready sale of late, at 12@14c. Demand is good for extracted, at 4@7c. Supply of all kinds is insufficient.

Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. M. & S.

NEW YORK, N. Y., Sept. 11.—New crop of comb honey is arriving and while the receipts from N. Y. State are light, we are receiving large quantities from California. Had two cars of choice comb and have several more to follow. On account of warm weather the demand is rather light as yet. We quote: Fancy white, 1-lbs., 15@16c.; fair white, 12@13c. No demand as yet for buckwheat and dark honey. Extracted is plentiful, especially California and Southern. We quote: California, 5@5¾c.; white clover and basswood, 6@6¼c.; Southern, 45@55c. a gallon.

Beeswax in fair demand and firm at 28@29c. H. B. & S.

NEW YORK, N. Y., Sept. 23.—The market for comb and extracted honey is now open. Comb honey is not arriving as freely as expected, presumably on account of the prolonged heat, but it is selling very well, considering the hot weather we have had this time of the year. Of extracted honey there is quite a supply on the market; California and Southern with a fair demand. We are quotiug comb honey to-day as follows: Fancy, 1-lbs., 15c.; 2-lbs., 14@15c.; white, 1-lbs., 13@14c.; 2-lbs., 12@13c.; fair, 1-lbs., 11@12c.; 2-lbs., 10@11c.; buckwheat, 1-lbs., 10@11c.; 2-lbs., 8@9c. Extracted, clover, 5@7c; buckwheat, 5@5½c.; Southern, 50@60c. per gallon.

Beeswax is in fair demand, with supply limited; average stock, 27@28c.; fancy yellow, 29c. C. I. & B.

Vegetable Forcing-Houses.—Those interested in the construction of vegetable forcing houses will find the subject thoroughly discussed with illustrations in the June number of the Market Garden, a journal published monthly at Minneapolis, Minn., in the interests of gardeners and truckers. The Company will send the June number as a free sample.

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Convention Notices.

CONNECTICUT.—The fall meeting of the Connecticut Bee Keepers' Association will be held Wednesday, Oct. 30, 1895, at the Capitol at Hartford. MRS. W. E. RILEY, Sec. Waterbury, Conn.

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J. M. Jenkins—Yes, if kept at such temperature for any length of time.

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35th Year. CHICAGO, ILL., OCT. 31, 1895. No. 44.

Report of the Proceedings

OF THE

Twenty-Sixth Annual Convention

OF THE

North American Bee-Keepers' Association,

HELD AT

TORONTO, Ont., Sept. 4, 5 and 6, 1895.

W. Z. HUTCHINSON, SEC.

(Continued from page 679.)

The following address should have appeared the first thing in the report of the morning session of the second day, but owing to an unavoidable delay in receiving a copy of it from Mr. Holtermann, I am compelled to put it in out of its proper place:

The President's Address.

In the few remarks to which I shall confine myself I would say, that looking upon bee-keeping as an occupation, we are making progress in many desirable directions. There is still with some, unfortunately, a slight tendency to belittle bee-keeping by giving the impression that any one can keep bees and succeed with but little capital, no experience, no labor; and others we find, who, if they do not express it, have a lingering thought in their mind that the advantages of the occupation and the experience of able men should not be presented. All this we are leaving behind us, and we are emerging, in fact standing upon a broad and liberal platform, our industry being recognized as a wealth-producing power of the country; and we can justly be proud of our occupation.

Much has been said, and much has been conceded along the line of the interesting study of the marvelous honey-bee. The study of its life history has thrown open to scientific men some of the most beautiful laws in Nature, in that way increasing our reverence for the Creator of all things, who has set these laws in force. But we cannot emphasize too much the facts that bee-keeping may offer an opening to many in rural districts, who otherwise have to resort to the city, unable to find profitable openings in the country with the capital in hand; that bee-keeping displaces no other crop on the farm; that in taking the honey crop it takes nothing from the fertility of the soil; that bees are great public benefactors in the pollination of flowers, and that day by day, as investigations are being made, importance is being added to the honey-bee in its relation to plant-life; that honey is one of the best and most economical of foods. While we state these and many other facts, we might in justice point out that it takes care, experience, and time to succeed in bee-keeping; that it is a legitimate business, and that the cost of the production taken from the price at which the honey is sold, leaves but a moderate margin of profit to the bee-keeper.

During the past season the most of us have passed through trying times, very few indeed having made a living. The United States, as well as portions of Europe, have had a very light crop—probably after leaving enough for winter, no crop at all. In Canada, some districts such as British Columbia, Northwest Territories, Manitoba, in Ontario along the Ottawa river, and Northwestern Ontario have done well, but unfortunately in these portions bee-keeping is engaged in by but few.

As to our own organization, the "North American Bee-Keepers' Association," it has been claimed by some that it is not sufficiently representative. This is perhaps true, and yet it is the most representative body of bee-keepers on the continent, meeting here and there, north, south, east and west. It undoubtedly has had a comparatively small number of members, yet many have faithfully and steadily supported it throughout, and when we come to a term of years it embraces a very large membership. During the past year the Association has conferred a lasting benefit upon bee-keepers and railroads. The committee appointed by this organization succeeded in getting important concessions from the Western

President R. F. Holtermann, Brantford, Ont.

Classification Committee, and other districts will no doubt follow in their own interests.

As an Association, and as individual bee-keepers, we might do more to draw attention to the value of honey as a food, and in other ways increase the consumption of one of the healthiest and most economic of foods. Fear of adulteration has much to do with the limit of consumption. As bee-keepers, we must use every means in our power, or that can be put within our power, to convince our customers that honey is a sweet with essential oils added, distilled by Nature's laboratory, and gathered from the fragrant blossoms in the fields and forest. If we desire to gain ground, or even hold our own in the markets of the world, in this matter bee-keepers must stand shoulder to shoulder.

In closing, I need not point out that this is an age of conventions, where man to man we can discuss the great and minor questions affecting our calling. We are not supposed to see eye to eye, but we meet together to discuss methods, to pass resolutions, to convince and be convinced by every honorable means in the discussions. The greatest freedom of

thought should be permitted without in tone, manner or words, allowing personal feelings to creep in to mar the pleasure and utility of our discussions, ever remembering that we should never act contrary to our highest conceptions of duty. To side with error and wrong against our best feelings, or keep silence in the presence of injustice which should excite indignant denunciation is as wrong as it is to throw out insinuations as to motives and accusations for which there is no ground but the imagination.

We have before us an excellent program, and f have no doubt, with the complexion of this convention, that it can and will be one long remembered for its generally pleasant and harmonious feeling, vigor of discussion, and the valuable points which it has brought out, a portion of which in the present stage of journalism will reach the home of every thinking and reading bee-keeper on this continent and in other lands. R. F. HOLTERMANN.

THIRD DAY—FRIDAY MORNING SESSION (*Concluded*).

Mr. R. McKnight, of Owen Sound, Ont., read an essay on the subject of

Legislation for Bee-Keepers.

The Secretary, when requesting me to prepare this essay, simplified the work for me, by clearly and concisely sketching what he deemed the best course for me to pursue, in treating the subject he assigned me. I would have you, he said, go over the ground and point where good and evil has come from legislation. This implies that he thought me qualified to do what he asked me to do. It is needless to say that I do not claim to be familiar with the laws of the world bearing on this subject. I think, however, that I know the provisions of all such laws in force in this Province, and believe them to be as full and complete as those of a similar character in force in any other country. Indeed, I do not know of a law affecting bee-keepers (with the single exception of one recently enacted by the legislature of Michigan), the counterpart of which is not in force in Ontario. In reviewing the Ontario laws, then, we will fully cover the ground.

Before doing this, let us consider the justice or injustice of the law in force in Michigan. It provides that bees may not be kept nearer a public highway than 90 feet. This law can cause little if any inconvenience to rural bee-keepers, but may compel some apiarists in towns and villages to abandon the pursuit, or move their bees farther afield. The law does not manifest a clear conception of the matter on the part of those who enacted it, or a close scrutiny of their work by those immediately interested. If the legislature had been wisely advised, the public safety might have been fully secured, and bee-keepers in no wise inconvenienced.

Bees domiciled 90 feet from a public road, with no barrier between the hive and the highway, are a greater menace to the safety of the passer-by than if their hive stood but nine feet away, with a hedge or close board fence (say five feet high) along the margin of the highway. The distance ought to have been regulated with this fact in view.

Returning to the consideration of the laws of the Province affecting us and our pursuit, I find the first enactment relating thereto, an old and important one. It is entitled, "An Act Respecting the Right of Property in Swarms of Bees." I deem this law of sufficient importance (especially to Ontario bee-keepers) to warrant me in quoting it at length. Its provisions are as follows:

1. Bees living in a state of freedom shall be the property of the person discovering them, whether he is, or is not, the proprietor of the land on which they have established themselves.

2. Bees reared and kept in hives shall be private property, and as such shall, to the extent of 15 hives, be exempt from seizure for debt, or for the discharge of any liability whatsoever, save and except the amount of their purchase money.

3. Wherever a swarm of bees leave a hive the proprietor may reclaim them, so long as he can prove his right of property therein, and shall be entitled to take possession of them at any place on which the swarm settles, even if such place be on the land of another person, unless the swarm settles in a hive which is already occupied, in which case the proprietor shall lose all right of property in such swarm; but he shall notify the proprietor of such land beforehand, and compensate him for all damages.

4. Any unpursued swarm which lodges on any property whatsoever, without settling thereon, may be secured by the first comer unless the proprietor of the land objects.

5. If the proprietor of a swarm of bees declines to follow such swarm, and another person undertakes the pursuit, such other person shall be substituted in the rights of the proprietor, and every swarm which is not followed shall become the property of the proprietor of the land on which it settles, without regard to the place from which it has come.

The above is the law of this Province respecting the proprietorship of swarms and absconding swarms, and is so clear that it requires no comment by me.

The next law (in the order of its passing) which we are to consider, is entitled, "An Act for the Suppression of Foul Brood Among Bees." The provisions of this Act are too many to be here quoted in full. Its principal provisions relate to the Inspector, and his work. The Inspector is appointed yearly, by the Ontario Bee-Keepers' Association, or its Board of Directors, who fix his remuneration; the latter, however, is subject to the approval of the Minister of Agriculture, through whose department he receives his pay. The principal clause of the Act, relating to the Inspector, reads as follows:

INSPECTION OF INFECTED APIARIES.

3. The said Inspector shall, whenever so directed by the President of the Ontario Bee-Keepers' Association, visit without unnecessary delay any locality in the Province of Ontario, and there examine any apiary or apiaries to which the said President may direct him, and ascertain whether or not the disease known as "foul brood" exists in such apiary or apiaries, and whenever the said Inspector shall be satisfied of the existence of foul brood in its virulent or malignant type, it shall be the duty of the Inspector to order all colonies so affected, together with the hives occupied by them, and the contents of such hives and all tainted appurtenances that cannot be disinfected, to be immediately destroyed by fire under the personal direction and superintendence of the said Inspector, and after inspecting infected hives or fixtures, or handling diseased bees, the Inspector shall, before leaving the premises, or proceeding to any other apiary, thoroughly disinfect his own person and clothing, and shall see that any assistant or assistants with him, have also thoroughly disinfected their persons and clothing; provided, that where the Inspector, *who shall be the sole judge thereof*, shall be satisfied that the disease exists, but only in milder types, and in its incipient stages, and is being, or may be, treated successfully, and the Inspector has reason to believe that it may be entirely cured, then the Inspector may, in his discretion, omit to destroy, or order the destruction of the colonies and hives in which the disease exists.

The law also directs that bee-keepers in whose apiaries foul brood exists, or who know of foul brood existing in any other apiary, and fail to notify the President of the fact, may be prosecuted before a Justice of the Peace, and fined.

Upon receiving such notice, or otherwise becoming aware of the existence of foul brood in the yard of a bee-keeper, the President must immediately direct the Inspector to proceed to and inspect the bees.

When on inspection the disease is found to be present, and the bees destroyed, or treated, the owner may not conceal the fact. Thereafter he is prohibited from selling or bartering bees or appliances until the Inspector gives him permission to do so. Non-compliance with this provision subjects the offender to a fine of not less than $20, or more than $50.

This law has been in force about five years, and has, I believe, resulted in much good; inasmuch as it has kept in check, if it has not entirely eradicated, the disease in Ontario. Its good results, however, are largely due to the fact that our Inspector has combined the work of a doctor with the duties of an inspector; nevertheless the law has in it some undesirable points, one of which is, the supreme power of the Inspector. Once ordered into the field, he is the arbiter of the bee-keeper's fate. It is his prerogative to say whether the disease is mild or malignant, and to destroy, or forbear to destroy. It follows, then, that none but a competent and discreet man should be appointed to an office where the incumbent is clothed with such unlimited power. An unscrupulous or vindictive man may do a great injustice in his capacity as inspector, and escape the consequences of his act. It is true the law gives the Association power to make rules to govern his conduct, but, as far as I know, nothing has been done by that body to regulate his conduct while engaged in the work of inspection.

When the Inspector pronounces the disease present, and of a virulent type, and decides to destroy the bees and appliances, or either; and the proprietor challenges his judgment, an appeal should lie, to a competent disinterested third party, whose decision would be final. This referee should be appointed by the Association. The *ipse dixit* of one man should not be deemed sufficient to warrant the destruction of another man's property.

Soon after the passage of the above law, a statute was enacted, prohibiting the spraying of fruit trees while in bloom, with arsenites or other poisonous substances. A similar law is in force in some of the United States. I am not sure such a law is of much use to bee-keepers. It only protects them from injury at the hands of *ignorant* fruit-growers. The spraying of fruit trees is coming into general practice, and it has come to stay while the present pests of fruit-growers abound. What with official bulletins and newspaper articles,

no one need be ignorant of how and when to do it. As yet, however, it is little practiced except by *intelligent* fruit-growers; and intelligent fruit-growers have too much regard for their own interests to spray their trees with arsenites while in blossom. The self-interest of fruit-growers affords about all the protection to bee-keepers they can hope to secure from spraying out of season.

The last effort at law-making, in the supposed interest of bee-keepers, was undertaken about three years ago, and pressed by a few persistent members of the Ontario Bee-Keepers' Association, under the sanction of a majority of, and at the cost of, the Association. The discussion on the "sugar honey" question, that occupied such a prominent place in the bee-journals at that time, was the inspiring cause of these gentlemen's zeal, in promoting the passage of a law to prevent its manufacture and sale. To carry their views into effect, the following Bill was drawn up:

No imitation of honey, or "sugar honey," so-called, or other imitation for honey, manufactured or produced from cane-sugar, or from any other substance than those which bees gather from natural sources, shall be manufactured or produced, or offered for sale in Canada, or sold therein; and every person who contravenes the provisions of this Act in any manner, shall, on summary conviction, incur a penalty not exceeding $400, and not less than $100; and in default of payment, shall be liable to imprisonment for a term not exceeding six months, and not less than three months.

The importance attached to the passage of this Bill, on the part of its promoters, may be learned from their efforts to secure its enactment. Every year for the last three years time and money have been spent with a view to this end. Delegation after delegation have visited the capital, while parliament was in session, and numerous letters have been written Ministers of the Crown and others, that this apparently much-desired prohibition might be made law, but up to the present time the energetic men who have had it in hand have been doomed to disappointment—a clear enough proof that the law-makers of our land have not been convinced of its necessity. I am opposed to the enactment of needless laws. I look upon this sugar-honey Bill as needless. It is needless because we have now, and for many years past, a good and salutary law respecting the adulteration of food, that affords bee-keepers, and the public generally, about all the protection the sugar-honey Bill aims at securing. I have given you the text of this Bill—let me now draw your attention to the points in common between it and the "Adulteration of Foods Act." The latter Act declares that "No person shall manufacture, or offer for sale, or sell any food which is adulterated under the meaning of this Act;" and under this Act "Food is deemed to be adulterated," 1st, "If any substance has been mixed with it, so as to reduce or lower, or injuriously affect its quality, or strength." 2nd, "If any inferior or cheaper substance has been substituted wholly or in part for the article." 3rd, "If it is an imitation of, or is sold under the name of, another article."

Substituting a cheaper article, making it to assume the appearance of the genuine thing, and selling it under the name of the genuine article, is the fraud the sugar-honey bill aims at preventing. It is manifest from the provisions I have quoted that the Adulteration of Foods Act fully covers this ground. Why, then, seek after that which we already possess? The Bill under review, would, I repeat, be but the re-enactment of an existing law; and, as such, needless. The one aims at amending the other by impairing a heavier fine when adulteration is detected. Fifty dollars is the maximum fine in the Adulteration Act, for manufacturing or selling food mixed with "that which is not injurious to the public health." Four hundred dollars is the fine here sought to be imposed for precisely the same offense—for no one will aver that the admixture of sugar with honey is injurious to the public health.

Understand, that the sugar-honey Bill is an amendment to the Adulteration Act; and, if passed, we would have the anomaly of a law on our Statute Book, one section of which imposes a fine *eight* times as heavy as another section of the same Act imposes for the same offense. No wonder the Bill in question has not passed into law; but it is a wonder that otherwise sensible men should "spend their strength for nought," and "money for that which is not bread" for bee-keepers."

The Bill is objectionable, too, in that it legalizes the sale of "honey-dew" and "bug-juice." "That which is gathered by the bees from natural sources" is not always honey. Both the above are gathered by the bees from "natural sources"—one of them, at least, is undesirable food.

R. McKNIGHT.

J. K. Darling—I think the essay a fair one, but I fail to see how the referring of a disputed case of foul brood to a third person is going to help matters any. It simply transfers the power to another person.

Mr. McEvoy got the impression that his character as inspector had been assailed, and attempted several times to defend himself against such an imputation, but was called to order by the President who held that there was nothing in the essay that could be so construed.

Mr. S. T. Pettit asserted that the law prohibiting the manufacture and sale of filled cheese was similar to the one asked for by the bee-keepers. Mr. McKnight disputed this point, and the assertions and re-assertions became so spirited that the discussion was cut off.

Next Place of Meeting and Election of Officers.

Upon motion of Dr. Mason, it was voted that the time and place for holding the next meeting be left with the Executive Committee.

The following officers were elected for 1896: President, A. I. Root, Medina, Ohio; Vice-President, Wm. McEvoy, Woodburn, Ont.; Secretary, A. B. Mason, Toledo, Ohio; Treasurer, W. Z. Hutchinson, Flint, Mich.

A vote of thanks was given for the use of the hall, to the Toronto papers for the kindly notices given, and to Mr. H. J. Hill, of the Toronto Exhibition, for the assistance and advertising that he had given the meeting.

Next came an essay by Dr. J. P. H. Brown, of Augusta, Ga., entitled,

What is Indicated by Color in Italian Bees?

Before I can proceed to answer this question, I beg leave to ask another, and to make a few observations thereon. Is the Italian bee a fixed type or race, with a distinct individuality, or only a variety of *Apis mellifica?* That it is only a variety, and not a fixed type, is a fact well established, both by its physical characteristics in breeding, and by a study of its geographical distribution in its "Sunny Italian clime."

But to constitute a variety or breed of any species, there must be some distinguishing characteristics. Thus, the different breeds of cattle, horses, swine, poultry, etc., can readily be distinguished from each other by certain physical mark-

Dr. J. P. H. Brown, Augusta, Ga.

ings, and by peculiarities of temperament. This same law applies to the Italian bee.

We have been accustomed to find it in those Italian districts, where it exists in its highest state of development, with the three abdominal segments next the thorax of a color varying from a bright yellow to a dark leather. These three yellow bands are claimed to be a test of purity, but there are physical conditions that prevail in this variety of bees that are really more reliable as a test of purity than the yellow bands. For instance, the pure-blooded bee will maintain its position on the combs, and will not run and scamper when smoke is applied, and the hive opened, like bees of other varieties. The queens are less excitable and not so easily frightened.

I wish here to be understood that these observations apply to Italian bees as received from Italy.

Every experienced breeder of Italian queens knows that by a selection of his yellowest female and male stock, that in a few generations he can produce bees with bands much yellower and brighter than the original imported stock, and if there is an introduction of Cyprian or Syrian blood the yellow is further extended and increased. Queens from such stock may be bright yellow; drones brilliantly mottled with yellow; and workers with four and five yellow bands. The dull markings of the Italian ancestors are obliterated by the brightness of the golden beauties. It is very questionable, in my mind, whether these Americanized four and five banded bees can, with propriety, be called Italians. There is a change of physical characteristics from the original. They cannot strictly come within the text of my essay. Color here is certainly no criterion of purity. It only indicates that there has been a selection of yellow stock for breeding.

My text confines me to the markings of Italian bees as we get them from Italy. These must be pure if the fact of their coming from that country can make them so. The color of imported Italian queens varies from quite dark to yellow; drones from nearly black to mottled with yellow; workers with three abdominal bands varying from dark leather to bright yellow. In some cases the third band cannot be seen until the abdomen is distended with honey. The queen progeny of many may vary from nearly black to yellow. Now we cannot say that the imported queens that produce dark queen, drone, or worker progeny are *impure*; or claim *purity* for only the bright ones. The dark color does not indicate *impurity* any more than the light color indicates purity. We have seen that the Italian bee is only a variety, and, as such, in breeding, it is liable to sport, or revert back toward the original—sometimes to dark—sometimes to yellow, but still maintaining the three yellow bands as a sort of standard of excellence. Without some standard of excellence or ideal it would be impossible to breed a variety up to a high attainment.

When the breeder of bright yellow bees embodies in his bee vigor of constitution, and an increased capacity for gathering honey, as the prime factors, and color as a secondary consideration—*utility leading beauty*—we shall have the bee of the future. Color, then, in the Americanized Italian will indicate excellence in the bee, and the insect itself will stand as a monument to the skill, patience and perseverance of its developers.

J. P. H. Brown.

The report of the Auditing Committee showed the finances of the Association to be as follows:

RECEIPTS.

Balance on hand after St. Joseph convention	$28 23
Dues paid at Toronto convention	36 00
Total	$64 23

DISBURSEMENTS.

Salary of Secretary at Toronto	$25 00
Other expenses in connection with Toronto convention and previous to meeting (such as Badges, Programs, etc.)	31 70
Total	$56 70
Balance on hand	$7 53

W. Couse,
D. W. Heise,
Geo. W. York, } Com.

In the list of those who paid their annual dues, on page 614, these should have appeared: Rev. Emerson T. Abbott, St. Joseph, Mo., and Geo. F. Leslie, Braeburn, Pa.

In the list of Life Members present, on the same page, should be the name of J. T. Calvert, Medina, Ohio.

The convention adjourned to meet in 1896 at the call of the Executive Committee. W. Z. Hutchinson, *Sec.*

Liberal Book Premiums are offered on page 690, for the work of getting new subscribers to the Bee Journal. It is a fine chance to get a complete apicultural library. Think of it—40 cents' worth of books given to the one sending a new subscriber! Remember, please, that *only* present subscribers to the Bee Journal can take advantage of that offer. The publishers of the Bee Journal believe in making it an object for the old subscribers to push for new readers among their neighbors and friends, hence the generous premium offers to them. It is hoped that all may begin *now* to work. Sample copies of the Bee Journal free.

Contributed Articles.

On Important Apiarian Subjects.

How and Why I Number Colonies.

BY J. W. SOUTHWOOD.

While W. Z. Hutchinson and Dr. C. C. Miller, and others, are discussing the numbering of colonies and kind of tag best to use, I will give my method, and some of the reasons why.

I winter my bees on the summer stands, and therefore do not need a number on both hive and location. I use a stand 3 to 4 inches high, and an alighting-board beveled on one edge so as to fit close against the front end of the hive-bottom and slope down on an angle of about 40°. These are not painted, and on them I place the numbers with white paint; the figures are some three or more inches long, with lines a half inch or so wide, so they can be seen at a distance.

I practice clipping the queens and hiving the swarm on the old stand, and do not move the number, so the same number remains with the same queen while she lives.

I face all hives the same way, so that when standing in front the numbers are easily seen.

I have a piece of plank of sufficient size, lined with lead-pencil, and also lines of the same drawn vertically so as to make as many columns as desired. In one column I give the number of colonies, in another the year when queens were hatched; in another, whence queens were obtained; in another, when the swarm issued; in another, the number of the colony produced by the swarm, etc.; at the last a larger column for general remarks, etc. This plank has the year marked at the top, and is kept in a convenient place. The next year I turn the board over, and the next I dress off the first used side and turn back. If before dressing off I desire something kept, I transfer to a book, which is seldom, as I always have the last record to transfer in part to the other side of the plank.

By this method I find it very convenient to tell where and when to obtain queen-cells, provided I desire to obtain such cells after prime swarms issued; and when to destroy queen-cells if I wish to prevent after-swarms by this method. The numbers serve a good purpose when talking of certain colonies or queens, and when certain work is turned into other hands when I am called away, as I am sometimes, etc.

Remember, I want the colony numbered, but not the hive.

Monument City, Ind.

Bees and Honey-Plants in Utah.

BY E. S. LOVESY.

While this is looked upon as an "off year" among the bees here, in some localities the bees have swarmed a great deal, and in others they have not swarmed at all. There are several causes for this. In some localities the season is colder and later than in others. Some have a great deal of fruit and locust bloom, while others have to depend upon the lucern fields or sweet clover. Some of our bee-keepers complain of a poor honey-flow this season. Then, again, I have received letters from many bee-keepers, covering several counties, saying that the honey-flow is very good—some even say that it is the best they have ever seen. The following sentence is from a letter by J. A. Smith, of Heber, Wasatch county:

"Mr. Lovesy:—We are having the best honey-flow here now that we ever had since I have owned bees. The honey is very white; it is gathered from white clover and lucern. From one swarm, hived June 12, I extracted on July 19, 70 pounds, and on July 28, 80 pounds; and now, Aug. 7, they have fully 80 pounds, as they have 16 Langstroth frames 17⅜x9⅛ nearly capped."

While the above is not at all remarkable, it is a good yield. Every year, in favored localities, and under favorable conditions, we hear of large yields of honey; but if we judge from the reports received from different parts of Utah the present season, it proves that the heavy yield of honey is more extended than usual. Still, with all this success in many localities, there are a number of places where the yield of honey has been light. There are several causes for this. One of our main honey-producing plants has been almost a total failure in many places this year, namely, the sweet clover. In many places, prior to the middle of August, the bees did not work on it at all, and in some places since that date they have worked on it but very little.

Lucern, or alfalfa, is on top this year; the yield of honey

from this plant the present season, in some localities, has been enormous. Rocky Mountain honey-plant, white clover, catnip, and other honey-producing plants have given large yields of honey in some places, but lucern has been by far the main honey-producing plant. In two apiaries, each in the midst of from three to four hundred acres of lucern, and located about 10 miles apart, the bees have gathered from 100 to 200 pounds per colony. A few of them have gathered fully 300 pounds. While lucern can be relied upon as a very good honey-producer, it does not always yield as much as it has this season. This is a curious feature with all, or nearly all, of the honey-producing plants. One year they will yield large amounts of honey. Then the next there may be a partial or total failure. Viewing our honey-plants from this stand-point, I do not think it will pay to cultivate any plant that needs re-planting every year, unless they are self-sowing, and can take care of themselves—such as sweet clover, cleome or Rocky Mountain bee-plant, and others. After once being planted, if the soil, climate and conditions are suitable for them, it is almost impossible to kill them out, and, like lucern, they like a rich, dry, sandy loam, and they all will stand the drouth as well, or better, than most other plants.

The lucern, when once planted, is good for almost any number of years. There are many lucern fields here in Utah that have been planted 30 years or more, and they grow from five to nine tons of hay to the acre, as good as when first planted. Thus it will be seen that while it is a very good honey-plant, for a forage plant it is one of the best. But I do not think it would do very well in dry land, where solid rock or hard-pan is near the surface, as in that case the roots could not get down to moisture. This plant has been written up sufficiently in the American Bee Journal; it is easy to plant, and the seed is cheap. If I wished to try it, I would prepare the soil in the fall, and sow the seed as soon as the ground is dry enough to work in the spring.

While good honey-secreting plants are necessary to success in bee-keeping, there are other conditions necessary to success besides honey-plants. One is management. We often find too many bee-owners, but not enough bee-keepers. To dump bees into a nail-keg, or a dry-goods box, or even into a hive, and let them do as they like, or as they can, and when full let them lie out on the box or hive, or swarm out and fly off, will not bring success. I know of a number of colonies in this condition, and they give little or no returns to the owners. But with proper management, as far as Utah is concerned, unless something unusual occurs, the bees will always pay the owner for his care and attention.

Salt Lake City, Utah, Sept. 23.

Hunting Wild Bees—How to Do It.

BY J. H. ANDRE.

September 19 being one of those rare days "just right for bee-hunting," I packed my kit and hied to a favorable locality some 3½ miles away. The timber was scattering hardwood from which the denser growth of hemlock had been taken some years before. Bees were found on asters, which grew in profusion, and set to work on a comb containing thin sugar syrup. The line seemed to be what is known among bee-hunters as a "wide line," or two lines nearly in the same direction. The first move from the clearing into the woods some 40 rods was "off the line," as but few bees came to the scent. A return of part way, and on a somewhat different course, soon gave a strong line. A move of 50 rods without any bees coming to the scent proved I was beyond the tree. Returning half the distance to an open spot in the woods, the bees came immediately, and a glance up a huge maple showed me the colony.

Returning on the line to where the bees were first worked in the woods (and a filled comb had been left to keep the line working in case the bees failed to come to the comb further on), I made an examination of the bees, and found them all of one size and shape, which every one that has knowledge of bees knows that it proves they belonged to the same colony.

I was on the point of packing my kit and starting for home, when I noticed a bee take a somewhat different course than towards the tree found. A close watch showed another line without a single bee going towards the tree found. This is the general outcome of two colonies in different localities working on small pieces of comb. One will retire and leave the others in possession of the sweets. The line was followed some 30 rods, and this time they were located in a dead maple stub of a tree, some 40 feet in height.

The next day being pleasant, more bees were set to work in another locality. They seemed the same "wide line" of the day before. Several moves brought me through the woods half a mile away. The bees came quickly, and still led on towards an apiary. This dampened my spirits somewhat, but two sizes of bees had been noticed at the beginning, and returning by a different course, the first tree examined (a maple) contained the colony.

To be a successful bee-hunter one must be a woodsman, use much head-work, have a general knowledge of bees, and much practice at the business. Lockwood, N. Y.

Starting an Apiary in California.

BY W. D. FRENCH.

Many Eastern correspondents ask me about starting an apiary in California, having read of the wonderful yields of honey, delightful climate, etc., which abound through the State; and the cheapness at which bees can be bought, all combine to arouse the anxieties of men who wish to get rich within a short time.

Those who anticipate changing their destinies from East to West, should not be led by flattering accounts, imaginery or dreamy conclusions.

I do not wish to be understood to say that California is not a good State, as I believe it to be one of the best—its climate cannot be excelled, although back in the mountains, where bees are kept most extensively, and for profit, the mercury registers from 85° to 110°, Fahr., during the greater part of summer, which would make it quite comfortable for a New Englander without his winter suit.

As a rule, all localities in this part of the State, are stocked to their fullest capacity, though by going far enough inland, over grades and precipices, a good location can be found.

As to the price of bees, there are none to be bought in good movable-frame hives, for less than $3 to $5. Many of the bee-keepers here are those who know very little of the art or science of the pursuit. There are, however, bees that can be bought for perhaps $1.50 per colony, in old rickety or Harbison hives.

Those who keep bees as above referred to, are, as a class, ready to sell their product at whatever price offered; buyers understanding the situation much better than those who sell, establish a market price for honey that pleases themselves, to the utter chagrin of the practical apiarist who depends entirely upon the product of the bees.

Dependence upon a good honey season in this country cannot be strictly adhered to, as the previous season fully demonstrates, and I am fully convinced to my own satisfaction that this season's crop has been largely over-estimated.

There is work to be done in this glorious climate by the advanced bee-keeping fraternity, such as will place each individual in a position to dispose of his product without the intervention of a lot of sharks who combine to fatten upon the honest labor of those who toil. Foster, Calif.

Some Experiences of the Past Season.

BY GEO. M'CULLOUGH.

I started into the winter last year with 11 colonies, with what seemed to me sufficient stores for winter. I boxed them up with old boards, and packed straw around them, leaving the front and entrance open, and to the south, with a good cover over them, and thought they were in safe condition. But about March 1, one warm day, I looked into the hives and found 3 colonies dead—no honey left—starved! Several other colonies were very scarce. Having only two Miller feeders, I used them on the most needy colonies, while I made 4 or 5 more, and continued to feed gradually until they all bred up well before the elm, maple, willow, and such other things took their attention. So the 8 colonies started nicely, some in 10-frame and some in 8-frame hives.

The season here (southwestern Iowa) was too dry until the last week in May, when we had our first good shower to start vegetation lively.

About May 15 one large 10-frame colony began to lie out, and thinking they lacked room, I took off the half story and put on a full story with 10 frames—3 frames of good old comb, and 7 frames with full sheets of foundation—and I thought that would give them room enough, but evidently too late, for they threw off a strong swarm on the 20th—just five days after the top story was supplied for them. The upper story was still left on, and they went to work storing some honey above, and in looking in on them a time or two I

thought I was going to get some honey, and looked no more until July 24, when, on examination, I found six frames well filled with brood. I did not need to be surprised, as there was no queen-excluder below them, and I just lifted out the 6 frames full of brood and bees, and the two adjoining frames pretty well drawn out, and some honey, and set them in an 8-frame hive. The queen was on one of the frames, and was taken to the new hive. Then, of course, I filled up the space in the upper story of the old colony with 8 frames with full sheets of wired foundation. Following that, I took 5 frames of brood and bees from a strong colony, placed them in an 8-frame dovetailed hive, and 3 frames of foundation to fill up; I also put in 5 frames of wired foundation in the old hive after adjusting the frames with bees and brood near the central part of the hive, and put the new frames on the outer part of these. Did I do right in this?

Then I took 3 frames of brood and bees from No. 9, and the same from No. 10 (each 10-frame hives), sprinkled them with flavored water, and put them in an 8-frame hive, filling up with 2 frames of foundation as before, and filling up the old colonies with 3 frames each of wired foundation. (I think full sheets are much better than starters, even large ones, as the bees are so likely to build drone-comb, and it takes them so much longer.)

On June 5, my wife, daughter and I went to a social party two miles north, and after spending the day very pleasantly, until about 5:30 p.m., we started home, and found a small swarm of bees on a bush on the roadside. I got out and went back a short distance to a neighbor's house and obtained a suitable box; cut off the bushes the bees were on, with my pocket-knife, laid them down on the ground, and set the box, mouth down, over them, and as soon as I heard the hum of the bees starting up into the box, we drove home (½ mile), then prepared a hive, drove back, and soon hived them. I fastened them up and drove home. They have done nicely, and are a fair colony now. But a swarm left us that day—absence, you see.

On June 12 a good, strong swarm came to us and settled on an apple tree, about two rods north of the apiary, and instead of cutting the large branch with a good many fine winesaps on it, I took a short step-ladder, nailed four laths on the top step, spread a sheet on it, set it under the bees, then put the hive on the sheet, so that I could just draw the branch down a little and jar the bees off onto the sheet at the entrance of the hive, but careful to shake or brush off all the bees.

I had two swarms to leave me this summer just in the act of trying to hive them, and in both cases the bees started rapidly into the hive, but not finding the queen, I think, they came out again and clustered around the queen, and while I was busy here and there they were gone. I believe that is largely the trouble with bees leaving the hive—after once going into any fairly clean hive—that the queen has not been shaken off with them, or they were queenless; but I never attempt to hive a swarm, of late, except on full sheets of foundation, or some empty comb—it certainly pays well, as you get *so much* nicer combs, and in much less time, and in that way very little drone-comb.

On June 24, while the swarm did not come to me, it came to a near neighbor (O. D. Fletcher), who told me he *could not* handle bees, but kindly sent me word to come and get them if I wished. I gladly accepted the offer, and got a very nice, large colony of bright Italians, and they are "rustlers;" have filled their brood-chamber, and about a half dozen shallow frames in the surplus department, with nice honey.

On June 26 another good swarm came to us, and is doing finely—has stored some surplus.

On Aug. 6 a very fair swarm came and settled on the apple-tree before referred to, was hived on full sheets of foundation, and is doing nicely.

We have not had a great honey season. The basswood flow was hindered very much by two cold days and some rainy weather the latter part of June. Our honey-locust flow in May was about the longest and best here this year. I am situated with some timber west, 40 acres on the north, and some on the east, with quite a sprinkling of honey-locust, and it is a fine producer of nectar—perhaps not the finest honey, but in good time and good quantity for brood-rearing.

The editor may think I am rather long-winded this time, for one that has not written often, but I have noticed recently that he desires us, who have kept rather quiet, to give some of our experience, etc., and I take it that we are in a kind of "experience meeting." I have now 21 colonies in fair condition, but have not taken more than 10 pounds of honey yet, and do not expect to take more than 150 pounds of honey, all told—I will not take any from the brood-chambers.

The American Bee Journal has been a great help to me, and I think it still improves.

Braddyville, Iowa, Sept. 18.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Cleaning Up Extracting-Combs.

I have perhaps 100 empty extracting-combs that the honey has just been thrown out of. I wish to have them cleaned up by the bees. I would know what to do if the weather was warm, but now it is cold, and "quiet robbing" will not work. Can I place them on the top, or over a colony of bees, and have them clean them up without endangering the life of the colony? J. P. H.

Wyanet, Ill., Oct. 14.

ANSWER.—I don't think you'll endanger the life of the colony, but you may endanger the chances of getting the combs as nicely cleaned out as you would like. And I think it quite important that extracting-combs and unfinished sections that are extracted should be thoroughly cleaned out this fall if they are to be used again next year. I don't know of any way they can be thoroughly cleaned except by the bees. When they are put on the hives to be cleaned, the bees don't always take it into their heads to clean them out, especially if the brood-chamber is as well supplied as it should be with stores. Sometimes they clean up the daubiness and store the honey in part of the cells of the same combs. Then what's left candies, and when fresh honey is stored on it in the following season, the fresh honey candies very soon. Of course, if you don't care to have the honey remain liquid, you needn't take pains to avoid the candying.

I'll tell you what I did with a lot of combs this fall: They had a little fall honey stored in them, but not enough to make me care to keep them over, so I wanted the bees to clean them out. I put them in hives, left the hives uncovered at a distance of four rods or so from the apiary, and gave the bees a full chance at them, and they soon left nothing but dry combs with no bad results. But now mind you, I want to warn you about one thing. Don't let the bees get fully to work on the combs and then take them away. If you do, you may have a picnic with robbing at the hives. Leave the combs undisturbed for a few days after they are all cleaned out, and then the bees will keep trying to find some more honey in them rather than to try to force an entrance into some of the hives of weak colonies. There will still be fine days occasionally when bees will work lively on any combs that are exposed.

Cement Bottom for Bee-Cellar—Wintering.

1. I am building an under-ground cellar for my bees. I intend to have a cement bottom. Have you any objections to cement floors for bee-cellars?

2. Would it do to put the bees in before the cement was perfectly dry?

3. Would you take off the bottom-boards, or not?

4. I gave frames of honey to some of my light colonies to-day, and found that some of my late queens were laying considerable yet. Had I better wait for this brood to hatch out, and have a good flight before I put them in the cellar?

Baraboo, Wis., Oct. 12. H. H. P.

ANSWERS.—1. On one of my visits to Adam Grimm, he showed me a cellar purposely built to winter bees. It had a cement bottom, and seemed perfectly adapted to its design. Next time I saw him he told me it was a failure. He thought the cement bottom was to blame. Under my house is a cellar 31x33 feet. It was divided in two parts, and one room intended for the bees had a cement floor. Trial showed that bees wintered better in the other part, and for years I have put no bees in the room with cement bottom. So, although it's one of the things that it's hard to be entirely certain about, I think I'd rather not have a cement bottom in a bee-cellar.

2. That depends somewhat on the temperature. If warm

enough, say from 45° to 50°, and especially if the cellar be well ventilated, the moisture from the cement would do no harm. If 40° and lower, they will do much better in a dry atmosphere. Speaking of temperature, I might say that if ventilation and temperature are all right, I think bees will winter all right, cement or no cement, but I think the cement does no good.

3. I'd rather see your bottom-boards before answering. My hives have bottom-boards in the cellar, but the bottom-boards are reversible, and one side is for winter and one for summer. When reversed for winter, there is a space of 1⅛ inches deep under the bottom-bars, and a deeper space would do no harm. The entrance is the full width of the hive, and 1⅛ inches deep. With close bottom-boards, as they usually are, I'd rather have them entirely removed in the cellar. Indeed, I'd rather have entire vacancy under my hives than the deep bottom-boards, if it were not for two things. One is, that with the deep bottom-boards I can shut out the mice. The entrance, 12x1⅛ inches, has put into it a piece of heavy wire-cloth with meshes three to the inch. This effectually excludes the mice, while allowing free passage for the bees, for bees should never be fastened in the hive in winter. The other thing is, that with the deep bottom-boards fastened to the hives, they are always in good shape to be closed up ready for carrying or hauling.

4. I don't know enough to answer this question, but I think I would not consider these late-hatched bees very much, their number being comparatively so small that it is better to consider the welfare of the larger number. In either case it is well to wait for what you can feel reasonably sure will be their last flight in November. Of course, there's a great difference in seasons, some winters being a month later than others.

An Experience with a Robbed Colony.

1. I was looking over my bees a few days ago, and I noticed one colony that the bees seemed to be passing in and out pretty lively, and when I examined them I found that the bees that were passing in and out of the hive were robber-bees. They came from another hive about 10 rods away, and they passed right into the hive, just the same as they would their own, and it was a strong colony of bees, too. Why did these bees allow the robber-bees to carry out the honey without offering any resistance?

2. I examined the colony and I found what I thought was a virgin queen, but could not see any brood or eggs in the cells, so I contracted the entrance and left them alone until to-day. I looked at them again, and gave them a comb with some brood and eggs in it. When I went to put the comb in the hive, I noticed a bunch of bees on the bottom of the hive, about as large as a man's fist. I moved the ball a little, and I saw that they were around a queen. I smoked them a little, and they released the queen, and I took her out of the hive and kept her out until sundown this evening, and then I let her in at the entrance. Did I do right with her?

3. What made the bees ball the queen?

4. Do yon think it was an old, worn-out queen, or do bees ever ball virgin queens? I could not tell by the looks of the queen whether it was a yonng queen or an old one that had quit laying. C. S.

Saltillo, Nebr., Oct. 2.

Answers.—1. Perhaps because they didn't have a good laying queen. For some reason it makes a big difference whether bees have a good queen when it comes to the matter of resisting robbers. Possibly the scent of the queen is the important factor in the case. At any rate it's always considered good practice when a colony is troubled with robbers to see that it has a queen. Sometimes when robbers commence on a queenless colony, if a good queen be given to them in the evening, they will give the robbers so warm a reception the next morning that the latter will give it up for a bad job.

2. I have some doubt whether taking the queen out and putting her back in the evening did any good, and very likely it did no harm.

3. There may have been several reasons why the bees balled the queen. There may have been some imperfection about her that made the bees dissatisfied with her, in which case you will probably find her removed before long. It is also possible that the queen was all right, and your interference made the bees ball her. Sometimes they seem to ball their own queen as a matter of safety, to protect her. It is nothing so very unusual for bees to ball their own queen when she's all right. If left entirely alone they may free her in a short time, and it's probably the safest thing to let them alone. In many cases I've found a queen balled, when I promptly closed the hive and went about my business, and a few days later found the queen laying all right.

4. I don't know, but I think it more likely, from the circumstances you mention, that it was a virgin queen. Generally you can tell by her looks whether a queen is a virgin or not, and you can always be sure of it if you clip every queen as soon as she lays.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

A Time and Place for Everything.—"Bee-hive manufacturers seem to be rather averse to letting the public know of their existence."—Country Gentleman, June 20, 1895.

This will, no doubt, prove an amusing piece of information to the people who read the various bee-periodicals, as well as to the readers of many agricultural papers. The funny thing about it is that the special article from which the above is taken was sent out all over the country to dealers as an inducement to advertise in the Country Gentleman, and this in the month of June. One of the first lessons for a man in business to learn is that there are times and seasons for all things. In this special case, if the publisher had known anything about the bee-business, it would seem that he would not have expected any manufacturer or dealer to begin an advertisement in his paper in June, neither would he expect people who live a thousand miles away from him, and do largely a local business, to advertise in his locality at all. But these are not the only people who fail to make note of the time and place. There is not a season passes but what I find some bee-keepers who wake up to the fact that their bees need attention after it is too late. When the honey-flow is all over they rush off to some dealer and buy a lot of sections, generally saying, "My bees have everything full below, they must need more room." No doubt of it! but they needed the room a month before, and increased room will be of no benefit to them now, so far as surplus honey is concerned.

Then, there is the man who had a few pounds of surplus honey to sell. He does not think of time or place. He neglects to develop his home market, and rushes his honey off to the nearest large city, while the weather is hot, and the market is filled to overflow with all kinds of fruit. What is the result? He gets but little for it. Why? First, it was not *time* to sell honey; second, if it were, he went to the wrong market. A man who sends his honey away as long as there is anyone in his own community who will buy, if properly approached, makes a mistake, in my opinion.

Fertilization of the Peach.—The Oregon Experiment Station has issued a bulletin from which the Station Record, published by the United States, quotes the following condensation of facts bearing on the fertilization of this important fruit:

"Experiments were made with peach-trees in a forcing-house to determine their power of self-fertilization. Fertilization was done by hand, a brush being used, by spraying with water when the trees were in full bloom, and by placing a hive of bees in the house. All the fruit was matured on the tree to which the bees had access, while more or less dropped at the stoning period in the case of the trees fertilized by artificial means. A tree protected from the bees and not otherwise fertilized set no fruit whatever."

It seems strange, in the face of all these facts, coming from various quarters of the globe, that there should be any well-educated men, who have had opportunity to know the facts, who would deny the importance of the bee to the fruit-grower, yet there are such. However, the world moves slowly, and prejudice is sometimes more potent than demonstrated facts. The best bee-keepers can do is to go on holding up these testimonies to the world wherever and whenever opportunity offers. The day is sure to come wheo the value of our busy little workers will be recognized.

☞ See "Bee-Keeper's Guide" offer on page 703.

The American Bee Journal
ESTABLISHED IN 1861
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Editorial Budget.

The Amalgamation Committee, appointed at the Toronto convention, I understand is nearly ready to make its report. Judging from a "rough draft" of their report (which I have read), it is going to be quite satisfactory. It will be interesting reading. The matter is in the hands of an excellent committee.

The Toronto Convention Report is completed in this issue of the Bee Journal. It has run through just seven numbers, and I believe makes a very creditable showing. Surely, the major portion of the convention sessions were very interesting and profitable to those present; and the essays read will equal those of any convention of recent years.

Messrs. Alderman & Roberts, prominent Florida bee-keepers, at Wewahitchka, are represented by their honey and bees at the Atlanta Exposition. They have a colony of bees on exhibit in the Agricultural Building, in the "West Florida" space. The bees work out through the wall of the building. The bees are in a glass observatory hive, and attract much attention.

The Illinois State Bee-Conventions.—The annual meeting of the Illinois State Bee-Keepers' Association will be held in Springfield, Ill., Nov. 19 and 20, 1895. On account of the I. O. O. F. having a grand encampment there at the same time, there will be a reduced rate of a fare and a third for the round trip, all over this State. This should insure a good meeting.

The special meeting of the same Association will be held in Chicago, Jan. 9 and 10, 1896, in the Club Room of the New Briggs House, northeast corner of Randolph St. and Fifth Ave. This will be at the time of the National Cycle Show, when general excursion rates will prevail. A later announcement will give further information concerning this Chicago meeting and railroad rates.

Honey Commission-Men.—Last week I had an experience. So did two other people. It was all about some 6,000 pounds of extracted honey a Wisconsin bee-keeper had shipped in August to a Chicago commission firm.

There was a difference of about $90 between what the bee-keeper thought he should have for his honey, and what the dealer netted him. So the shipper came to Chicago, and not being able to get a satisfactory settlement, he called on me to see what I would advise, or could do in regard to the matter, although he is not a subscriber to the Bee Journal!

I wasted three hours of valuable time on the matter, and finally effected a compromise—the dealer giving his check for about $30 (his actual commission) to the shipper. Both then said they were satisfied. So what threatened to result in a lawsuit was peaceably settled.

The whole trouble was, as usual, the result of a misunderstanding. The shipper understood that he was to get 6 cents per pound net for his honey, on board the cars in Wisconsin. The dealer, it seems, had hoped to be able to render such returns, but claimed the honey was extracted before it was ripe, and consequently the flavor was injured by a slight fermentation. The shipper held to it that the honey was all right, but as the dealer had none of it left in his store, I was unable to verify either's statement. So there they were.

Now, bee-keepers, let me say, by all means have a clear and perfect understanding with your dealer, as to price and everything else of importance. See to it that your honey is all right, and if possible sell by sample. Honey, above all things, affords such ample opportunity for causing trouble and loss. No matter how much care is exercised by both dealer and shipper, do not expect that *every* shipment will result in entire satisfaction. It should, but often does not.

A New Bee-Smoker Factory is being built by Mr. T. F. Bingham, at Farwell, Mich., where shipping and other advantages for business are unexcelled. The Bingham bee-smokers and uncapping-knife are known wherever modern progressive apiculture has pushed its way.

Mr. Geo. E. Dudley, of Provo City, Utah, the genial Secretary of the Utah Bee-Keepers' Association, arrived in Chicago about two weeks ago, having come on ahead of two carloads of fine alfalfa comb honey, which reached here a week later. The two cars contained about 48,000 pounds of honey, one carload having been produced by one man and his children.

I believe it would pay the bee-keepers in every locality where sufficient honey is produced to do it, to make up one or more carloads, and send their best man along to market with it, to dispose of it to the best advantage. It is so much more satisfactory to have the honey, the buyer and the seller all together, for then there is no chance for any misunderstanding. The buyer can inspect the honey properly, and a definite agreement as to price can be settled upon.

Father Langstroth's Departure was very affecting, indeed. The following letter written to Editor Root, by Father L.'s daughter—Mrs. Cowan—and published in Gleanings for Oct. 15, describes the last days and moments of his life in a touching manner:

MR. E. R. ROOT—*Dear Friend:*—I can hardly tell you whether my heart is fuller to-day of sorrow for the loss of my dear father or of joy as I think of his blessed entrance into the land where "there shall be no more death, neither *sorrow* nor crying, neither shall there be any more pain, for the former things are passed away."

I can give you only a brief account of my father's last days. When asked, the Sabbath previous to his release, by our pastor whether he felt able to make the address at our communion service, he replied, "I shall be most happy to do so," adding, in response to the assurance that, if he did not feel able for it when the time came, he could be relieved, "Oh! I shall be able—it will be *a joy* to me, Mr. Raber. I am so glad you asked me!" He had been very bright and happy ever since his return from Toronto; but last week he took a heavy cold, and was much oppressed with it; and during the last few days he lost strength so rapidly, and seemed so feeble, that I wished him to notify our pastor not to depend upon his assistance on Sabbath. He was, however, confiden

that he could carry out his part in the services, and was so anxious to do so, that I could not insist.

On Sabbath morning he was unusually bright, and overflowing with happiness and gratitude to the Lord for his blessings. My eldest son, with his wife and baby, had been spending a week with us, and he was much pleased with, and proud of, his little great-granddaughter. He asked her mother that morning to wheel her little carriage into his warm room, and I shall not soon forget how happy he looked as he sat beside it, talking to and caressing the little one. They were at the church.

After dressing, father seemed much fatigued, and I again asked him whether he thought it were best for him to try to preach. He replied, "Oh, yes! I will say a few words, and then I will come home and rest, rest, rest." He is most certainly "at rest with the Lord."

Before preaching, Rev. Amos O. Raber moved the pulpit to one side and placed a chair on the front of the platform. Father began to address the audience sitting, with some explanatory remarks as to his weakness. After a few introductory sentences requesting the prayers of the congregation for himself and the service, he said: "I am a firm believer in prayer. It is of the love of God that I wish to speak to you this morning—what it has been, what it is, what it means to us, and what we ought——" As he finished the last word he hesitated; his form straightened out convulsively; his head fell backward, and in about three minutes he was "absent from the body, at home with the Lord."

There was no scene of confusion in the church. Tears were running down every cheek, but there were no screams, no loud sobbing. As one person remarked, "Heaven never seemed so near before; it seemed but a step."

"Then, with no fiery throbbing pain,
No slow gradations of decay,
Death broke at once the vital chain
And freed his soul the nearest way."

Sincerely yours,

Dayton, Ohio, Oct. 8. ANNA L. COWAN.

Bee-Culture Recognized.—Some of the Western States are taking quite an interest in the subject of bee-keeping, as they ought to do. At least Missouri and Kansas are doing so. I am made aware of this, from the fact that Rev. Emerson T. Abbott has recently been requested to deliver an address on the subject of "The Relation of Bees to Horticulture," at the next meeting of the Missouri State Horticultural Society, to be held Dec. 3, 4 and 5, at Neosho, Mo.

Mr. Abbott has also been invited by the Kansas State Board of Agriculture to address them at their next annual meeting, to be held at Topeka, Jan. 8, 9 and 10, 1896, on the subject of "Bee-Rearing and Honey-Production for Farmers." Secretary F. D. Coburn, when extending this invitation to Mr. Abbott, said:

"The purpose of this would be to point out to our people the feasibility and ways and means of every farmer having, if he will, an abundance of honey for home use and to spare, with almost no expense, by simply utilizing the abundant free materials around him permitted to 'waste their sweetness on the desert air.'"

While the above speaks well for Mr. Abbott, it also plainly shows that those interested in horticulture and general farming are awaking to the importance of bee-culture as an aid to the fruit-grower and to the farmer. It is earnestly hoped that other horticultural societies and State boards of agriculture may go and do likewise, as there is in nearly every State some one who is abundantly able to present the subject of bee-culture in its proper light, and who would at the same time be doing a grand service to those interested in rural industries.

Mr. Alfred H. Newman, manager of the Cedar Rapids Candy Company, of Iowa, called at the Bee Journal office on Saturday, Oct. 19. He was for years a member of the well-known firm of Thomas G. Newman & Son, of Chicago, who were prominent dealers in bee-keepers' supplies and publishers of the Bee Journal previous to June 1, 1892. At that time the Bee Journal was sold to the present publishers, and the bee-supply business continued by Thomas G. Newman until Sept. 16, 1895, when he sold out to The A. I. Root Co.

Among the Bee-Papers

Gleaned by Dr. Miller.

LONG-DISTANCE MAILING-CAGE.

A. E. Manum describes in Gleanings a cage for mailing long distances that seems admirably adapted for that purpose. It contains at each end two of the usual compartments filled with Good candy, and a central compartment with honey in the comb. Outside, the cage measures 7¼x2¼x1¼, and weighs, ready to mail, five ounces. It holds 75 or 80 bees, with food to last at least 60 days.

RAPE AS A HONEY-PLANT, ALSO FOR CATTLE, HOGS, AND SHEEP.

I received one pound of rape seed last spring, and sowed perhaps a third of it on poor, sandy land, and my bees just fairly swarmed on it for fully one month; and I also cut it up to feed my hogs on, and they ate it in preference to corn. I had the rape along my pasture fence, and was compelled to cut up all near the fence to prevent their reaching through to get at the rape, and my cattle were not short of pasture, either. I think it is one of the best honey-plants I ever saw, not even excepting white clover. I do not know how much honey my bees gathered from rape, simply because I was running them for increase this year; and I thrashed 2½ bushels of seed.—JAS. PRATT, in Gleanings.

RIPE HONEY FOR WINTER AND SPRING.

G. M. Doolittle says in Gleanings: "In my opinion, upon the injudicious use of the extractor is chargeable much of the loss of bees in winter; for where we hear of large yields of honey taken with the extractor late in the season, we almost always hear of a corresponding loss of bees by the same parties the next spring. To overcome this difficulty it is better to set aside enough combs of thoroughly ripened, sealed honey during the season to winter our bees; and then, when the honey-yield is over, exchange combs with the bees, extracting all that is left in the combs taken from the bees, if we so desire. In this way we are sure that the bees have such honey as they ought to have to winter on. This applies only to those who are prone to extract too closely during the season; but it is a good plan to work a few colonies for such combs of thoroughly ripened honey to be used in case of emergency, no matter how the bees are worked."

SECOND-HAND SQUARE OIL-CANS.

After a 20-years' experience, using thousands of cans, I am better satisfied with good oil-cans than to buy new ones. I have bought Lower California honey in new cans that were made of poor or lead tin, and so poorly put together that nearly all were in a leaky condition; but good oil-cans, always rejecting those that are rusty inside, being crimped at the seams, very seldom leak there, and, if well cleaned, I like better than the new ones made on this coast. I give 8 to 10 cents for them. I melt off the four faucets by setting four cans, with the corners that have the the faucets, together, putting a shovel of hot coals on them. A good worker can clean about 100 in a day by putting in a handful of unslacked lime in each, with three or four quarts of boiling water. After it is slacked, rinse it well, and afterward rinse out twice with cold water, washing them twice with lime. In that way it will clean them perfectly.—S. S. BUTLER, in Gleanings.

IS THE HONEY-BEE INDIGENOUS TO THIS COUNTRY?

The only authority quoted by Dr. Belknap for the probable existence of the bee in any part of the United States is the finding of a single pot of honey by the expedition of DeSoto at a place called Chiaha, on an island surrounded by shallow water, supposed to be on the upper part of the Mobile river, in Southern Georgia. I have referred to the narrative, as translated by Purchas, and find that this was the only honey seen or heard of by the expedition, which met with no bees. The granaries and storehouses of the natives were constantly ransacked by these needy Spaniards, from June, 1539, to July, 1543; and Barton pertinently remarks, "Had the honey-bee been a native of the countries which were the scene of DeSoto's villainies, the valuable products of this insect would have been frequently met with, and the bees, in territories pregnant with a profusion of nectareous plants, would have been seen very often, and in great numbers."

In addition to the above I may add that I have carefully

consulted the narratives of many early travelers, from Father Hennepin down, and find no mention of honey having been met with on any occasion than as above stated. Had the Indians possessed honey, would they not have set it before some of their guests? and would the latter, who mention everything else they met with, have forgotten honey?

In conclusion, as no one pretends that the honey-bee was found in New England, as Josselyn, who, in 1638, must have known the first English settlers, and been familiar with their doings here, says expressly that they introduced our beloved insect, I think we may very safely dispense with the Norwegian theory of their introduction, and assume that the *Apis mellifica* is a valuable European insect, for whose introduction we are indebted (as for many other blessings) to the people of the Mayflower, or their immediate followers.

The foregoing is from a letter written to L. L. Langstroth in 1864, by his brother-in-law, Wm. G. Malin, and now published in Gleanings.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

Keeping a Hive-Record.

I don't use any tags, nor do I paint the numbers on the hives, but have the plan of the apiary in my record book thus:

Honey-House.

	A B	C D	E F	G H
1	0 0	0 0	0 0	0 0
2	0 0	0 0	0 0	0 0
3	0 0	0 0	0 0	0 0
4	0 0	0 0	0 0	0 0
5	0 0	0 0	0 0	0 0
6	0 0	0 0	0 0	0 0
7	0 0	0 0	0 0	0 0
8	0 0	0 0	0 0	0 0
9	0 0	0 0	0 0	0 0
10	0 0	0 0	0 0	0 0
11	0 0	0 0	0 0	0 0
12	0 0	0 0	0 0	0 0
13	0 0	0 0	0 0	0 0
14	0 0	0 0	0 0	0 0
15	0 0	0 0	0 0	0 0
16	0 0	0 0	0 0	0 0

If I want to look in, say hive D, 10, I don't need to step in front of the hives and look for the number, but can stand in any part of the apiary, count down on row D, and make a bee-line for hive D, 10.

My record-book is 3x6 inches, just right for a hip-pocket, and it is a great satisfaction to sit down in the evening after a day's work with the bees, and go through the book to see what I have done, and map out my next day's work. Try it next season, and you will wonder that you could do so long without a record-book. R. V. SAUER.

Brackettville, Tex.

Keeping Empty Combs.

On page 503, Mr. G. W. Demaree names a problem for those who know a great deal about impracticable things, and especially for the practical bee-keepers, viz.: "Give us the best, cheapest, cleanly way of keeping empty combs when not in use."

I know that "impracticable things" are impracticable—I am trying to make a living by keeping bees, and I do nearly all the work myself. I keep about 100 colonies for extracted honey, and have not lost any combs or had them injured since I built my honey-house, five years ago.

I have a room 4x8x8 feet, ceiled so as to be bee-tight, with a small window in the rear end to give light. Strips, one inch square and eight feet long, are nailed horizontally on either side, and two inches further apart than the depth of the frame I use. These strips are for rests for other strips that hold the combs. These latter strips are 1½ inches by ⅞, and four feet in length. Two of these strips I place upon the lower horizontal strips at the rear end of the room, and hang the combs upon them as they are hung in the hives; then another tier, until the top of the room is reached. Then one strip is used for each lot of combs, allowing one end of the frames to rest upon the strip used in the previous tier.

When the combs are put into the room they should be fumigated with sulphur—two weeks later fumigate again, and, afterward, once in six weeks. I know this method is sure, and I am persuaded that it is as cheap and as cleanly as filling the combs with salt or gasoline.

A room as described above will hold about 1,200 combs. In fumigating, I use an old oven (a relic of the past). Fill it half full of burning coals, set it in the room, pour into it a half pound of sulphur, and shut the door.

Bessemer, Ala. C. C. PARSONS.

Something More About Crimson Clover.

I have noticed with pleasure the increasing interest shown by the American Bee Journal in the culture of crimson clover as a honey-plant.

I have sown it for several years, and have every year large fields of it. In walking through it when in bloom it seems that almost every blossom has a bee on it. It produces a fine grade of honey, and, unlike red clover, the bees can readily get at the nectar.

Valuable as it is for honey, it is one of the most profitable crops that can be grown. Among its advantages are these:

1. It grows in the winter, and prevents the land from washing.

2. It is cut in the spring, and the ground can then be utilized for another crop, thus getting two crops off the land per year.

3. Unlike the clover, you do not have to wait a year for a crop.

4. It yields more abundantly than red clover a kind of forage which horses and cattle prefer to almost any other.

5. According to the reports of the experiment stations, its nutritive value is of the highest. I know that my horses keep in the best condition on it.

6. It never causes "slobbering," as red clover often does.

7. It can be grown on sandy land where red clover will not thrive.

8. It yields twice as much seed as red clover.

9. But its greatest value is as a fertilizer, and as such is the best and cheapest known. It possesses more highly than any other leguminous plant the power of conveying to the soil the nitrogen of the atmosphere. Its roots go deeper into the soil than red clover, and are more numerous. It loosens up stiff clay land, which, after awhile, becomes as friable as if sand had been mixed with the soil. It has been shown by one of the experiment stations that an expenditure of $2.65 on crimson clover as a fertilizer put as much nitrogen in the soil as $15 worth of nitrogen purchased in commercial fertilizers.

As a good example of its value: I came into possession of a field which would not produce over 20 bushels of corn to the acre. By using about 25 bushels of ashes to the acre, and returning to the field the manure from the crops which grew on it I, last spring, harvested the heaviest crop of clover hay grown in this valley, and have to-day nearly ready for gathering a crop of corn of 75 bushels to the acre.

As a grower of this clover may I correct some errors in the articles in relation to it which have appeared in the Bee Journal? It is useless to sow it in the spring, as it will not thrive. It must be sown in the late summer or fall, according to location. Shallow cultivation of the land will not do; the ground must be plowed deeply, if it has not been so treated some time during the season. It can be sown in the corn at the last cultivation, and harrowed in with a very fine-toothed cultivator. If sown in the open field it should be brushed in.

The bee-keeper who sows this clover may not only make his crop of honey, but his crop of hay; have his land in far better condition than before, and ready for a crop of some kind as usual. Besides, his eyes will be brightened by the most beautiful field of waving color he has ever seen.

Lynn, N. C. E. B. THOMAS.

CANADIAN BEEDOM.

Outside the Bee-Papers.

Dr. Miller gleans very carefully "Among the Bee-Papers." I am all the time doing similar work outside the bee-papers, and occasionally find something well worthy of transference into the columns of the American Bee Journal. The poetic effusion which I copied from The Outlook, and which appeared in the Bee Journal of Oct. 3, is an example in point. Here is a gem which I found in a recent number of the New York Independent. It is by Blanche Nevins, whose pardon I ask for small alterations:

THE SNAKE AND THE BEE.

Snake and Bee go browsing over
Hill and valley, grass and clover.

Eager each upon her quest,
Choosing that she loveth best.

While within the Bee the food
Turns to honey, sweet and good,

In the Serpent it will change
Into poison, bad and strange.

Therefore, let the eyes that read
Note the moral and give heed:

Life, which close environs thee,
Holds each possibility.

May our days, then, fellow-man,
Bring forth honey if we can.

New York, N. Y.

The Bull and the Bees.

A Canadian story by Prof. Charles D. Roberts, of Windsor, Nova Scotia, appears in a recent number of the New York Independent, and tells, in a very graphic manner, how the occupants of a bee-hive were the means of saving a young girl from being gored to death by a savage bull. Of course the story will suffer by being abbreviated and condensed, but even when thus operated on, enough of the interest will remain to secure for it an attentive reading.

Nannie Miller hardly knew whether to consider herself a country girl or a town girl. Her home was in the city of Montreal, but she spent the summer and autumn in New Hampshire, on her grandfather Miller's farm. There was one drawback to her enjoyment of country life, which was, that she was desperately afraid of cows, however quiet they might be. On a neighboring farm there was a Jersey bull famed for his viciousness of temper. Of this bull the children of the village near by spoke in tones of terror, and Nannie had heard dreadful tales of his ferocity. One sunny afternoon Nannie started for the village to mail a letter. She made her way down the broad pathway, about 60 yards in length, which led through an old-fashioned garden to the highway. On either side of this path were clumps of shrubs and flowers, rows of peas and beans, thickets of artichoke and sunflower, and beds of vegetables. On one side an array of bee-hives faced the path. At the foot of the path a slight, white gate led out to the road, through a hedge of thorns and lilacs.

After passing through the gate she had not gone far before she heard a

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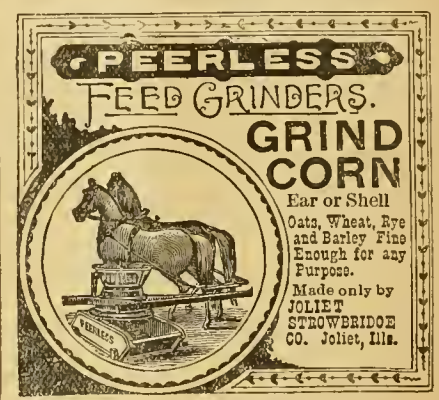
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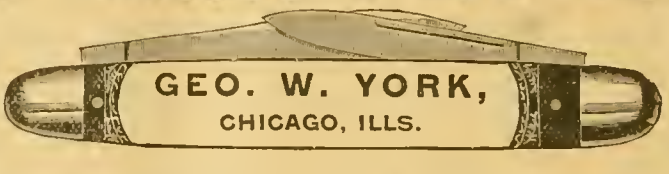
sound at which her heart stood still. It was the mumbling bellow and grunt of an angry bull. The sound came from just beyond a grove which hid from view a turn in the road. She swung around and sped like a bird for the little white gate. A moment later Farmer Hopkins' bull came trotting around the turn and at once espied the fleeing girl. Unfortunately she carried a crimson silk parasol, which acted on the bull as a red flag does in Spanish bull-fights. She thought of this in the midst of her flight, and letting go her hold of the parasol, it soared for a little in the air and then descended in the middle of the road just ahead of the bull. It diverted his attention for a moment, while he rent it in pieces and trampled it under his feet. As Nannie seized the latch of the gate she gave one wild glance behind her. The bull had just completed the destruction of the parasol, and was again thundering at her heels.

Rushing through the gate she slammed it behind her, but it did not latch. It swung a little way open. Not daring to go back and fasten it, she sped along, and there not being time enough to reach the house, she fled aside, darted between the bee-hives and the pea rows, and rushed down between the clumps of currant bushes. Just as the bull, having wrenched the little gate from its hinges and tossed it contemptuously over his shoulder, plunged into the garden, Nannie tripped on her skirt and fell headlong between the bushes.

The fall saved her. The bull would certainly have caught sight of her flying garments, but she was quite hid from his view. She had the presence of mind to realize this, and to crouch down in the smallest space that would contain her. Here, through the pea-sticks and vines and weeds, she could see her pursuer standing in the flower-bed by the path and staring in fierce uncertainty around the apparently deserted garden. Presently, after tearing up a clump of dahlias, the bull trotted over before the bee-hives. The bees were out in great force that afternoon. The fronts of some of the hives were black with them, and they hung in clusters and knots trying to cool themselves. The bull halted just before one of the largest colonies. He was hot and the bees did not enjoy his presence. As they buzzed angrily about his head, he shook his ears, then dug his horns into the ground and threw a shower of earth over the nearest hive. The bees took this as a challenge and were not slow to accept it. He felt several hot stings in his ears, and lowering his horns again with a grunt of indignation, he threw another shower of earth. Then the bees began to cover his hide and riddle it with their stings. They thrust venomously at his eyes, his ears, and his nostrils, till he was mad with pain.

The astonished animal switched his tail, skipped about with short bellowings of rage and threatening, and rooted his smarting nose in the soft earth. Bees were a new experience with him. But he was not long in connecting them with the white hive that so boldly confronted him. He would crush it and destroy his tormentors. Throwing his heels high in air, the bull launched himself on the bee-hive. Over it went with a dull crash, and in a black cloud out came the bees. The bull felt a myriad of little flames descend upon him scorchingly, but with quivering skin he endured them for a

THE "NOVELTY" POCKET-KNIFE!



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The material entering into this celebrated knife is of the very best quality; the blades are handforged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring steel, and the finish of handle as described above. It will last a lifetime, with proper usage.

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The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

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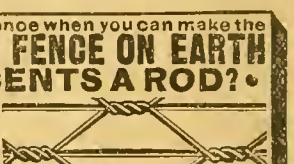

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Bee-Keeper's Guide—see page 703.

moment, while his horns and mighty forehead made kindling wood of the hive. He lifted his head with a roar of triumph, the honey streaming down his face and bits of comb dropping from his horns and ears. Nannie was forgotten, and from her hiding-place thankfully saw that in the bees she had found a potent ally.

To Nannie's eyes, the bull seemed wrapped in a cloud of black gauze, so thickly swarmed the bees about him. Meantime, as the poison of the stings took effect, the bull bounded desperately into the air, unable to endure the terrible torment. Then bellowing shrilly with pain and fury, he plunged forward into the raspberry thicket, and dashed through it right up to the garden fence. The branches scraped off many of his assailants, and bewildered his pursuers. When he reached the fence, he wheeled and galloped madly back across the garden, passing within a little distance of Nannie's hiding-place. Down went corn and sunflower, hollyhock and larkspur, before that blind charge. A moment later he caught sight of the open gateway, and rushed through it, carrying away a post as he went, and thundered up the road out of sight and hearing.

When he was surely gone, Nannie kept cautiously out of the range of the infuriated bees, crouching low among the peas, currant bushes, and raspberry canes, creeping as fast as possible toward the house. Last she stole through a high covert of artichokes, beyond which the bees were not circling. She ran indoors and upstairs, where her grandmother, awakened from her afternoon sleep by the roaring of the bull, was standing at the window, speechless with wrath at the destruction which had been wrought among the bees and garden products, and little did she dream of the peril from which Nannie had just escaped. Only after a wild burst of tears was the poor, frightened girl able to recount the danger that had befallen her, and her fortunate escape by means of the bees.

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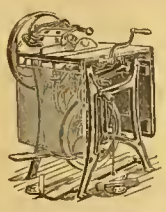

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Honey & Beeswax Market Quotations.

CHICAGO, ILL., Oct. 16.—We never had as good inquiry for honey as this fall, and never sold as much. We have not received as good prices owing to the amount of California stock unloaded on this market, which was sold at a very low price, both comb and extracted. We quote: No. 1 and fancy, 13@15c.; amber and dark, 8½@11c. Extracted, 5@7c. Beeswax, 28c. J. A. L.

BUFFALO, N. Y., Oct. 14.—Honey is in good demand. We quote: Fancy, mostly 16c.; choice, 14@15c.; buckwheat sells slowly at 10@12c. Extracted very quiet. Will advance liberally upon all choice shipments of honey. Beeswax wanted at 28@30c. B. & Co.

CHICAGO, ILL., Oct. 14.—There is more activity in the comb market, with prices of 15c. for fancy; other grades in proportion. Extracted dull, ranging 4½@7c., according to quality. Beeswax, 27@30c. R. A. B. & Co.

CHICAGO, ILL., Oct. 19.—We quote: Fancy white comb, 1-lbs., 14c.; No. 1 white, 13c.; amber, 12@12½c.; buckwheat, 10c. Extracted, as to quality and style of package, 5@6½c. Beeswax, 30c. S. T. F. & Co.

KANSAS CITY, MO., Oct. 4.—The demand for comb is fair, with a fair supply; extracted in light demand. We quote: No. 1 white, 1-lbs., 13@14c.; No. 2, 12@13c.; No. 1 amber, 11@12c; No. 2, 8@10c. Extracted, white, 6@6½c.; amber, 5@5½c.; dark, 4½c. Beeswax, 20@21c. C. C. C. & Co.

ALBANY, N. Y., Oct. 7.—Receipts of honey, as well as demand, have increased some, and the weather being cooler, I think this month and for part of next, as usual, will be the best time to market honey. We quote: White comb, 14@15c.; mixed, 12@13c.; dark, 10@12c. Extracted, white, 6½@7½c.; mixed, 6@6½c.; buckwheat, 5@5½c. H. R. W.

CINCINNATI, O., Oct. 23.—Supplies of all kinds are rather scarce yet, and arrivals find ready sales. Choice white comb honey sells at 14@16c., in a jobbing way. Extracted, 4@7c.

Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. M. & S.

NEW YORK, N. Y., Sept. 11.—New crop of comb honey is arriving and while the receipts from N. Y. State are light, we are receiving large quantities from California. Had two cars of choice comb and have several more to follow. On account of warm weather the demand is rather light as yet. We quote: Fancy white, 1-lbs., 15@16c.; fair white, 12@13c. No demand as yet for buckwheat and dark honey. Extracted is plentiful, especially California and Southern. We quote: California, 5@5¾c.; white clover and basswood, 6@6¼c.; Southern, 45@55c. a gallon.

Beeswax in fair demand and firm at 28@29c. H. B. & S.

NEW YORK, N. Y., Sept. 23.—The market for comb and extracted honey is now open. Comb honey is not arriving as freely as expected, presumably on account of the prolonged heat, but it is selling very well, considering the hot weather we have had this time of the year. Of extracted honey there is quite a supply on the market; California and Southern with a fair demand. We are quoting comb honey to-day as follows: Fancy, 1-lbs., 15c.; 2-lbs., 14@15c.; white, 1-lbs., 13@14c.; 2-lbs., 12@13c.; fair, 1-lbs., 11@12c.; 2-lbs., 10@11c.; buckwheat, 1-lbs., 10@11c.; 2-lbs., 8@9c. Extracted, clover, 5@7c; buckwheat, 5@5½c.; Southern, 50@60c. per gallon.

Beeswax is in fair demand, with supply limited; average stock, 27@28c.; fancy yellow, 29c. C. I. & B.

PHILADELPHIA, PA., Oct. 23.—Honey is selling freely, and good, choice comb sells on arrival. Pure Western extracted white clover sells very quickly and is in big demand. We quote: Fancy white clover, 16c.; choice, 14c.; dark, 11c. Extracted, 5½@6½c.; pure white clover, 8@9c. Beeswax will not, in our judgment, advance much more, as it did last year, large quantities having been laid up at low prices. It sells fairly well at 26c. on arrival. W. A. S.

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General Items.

A Good Crop of Honey.

We had a continuous honey-flow from June 1 till Sept. 20, and have a good crop of honey. E. E. Perkins.

Little, Nebr., Oct. 14.

A Very Dry Season.

My six colonies last winter wintered well on the summer stands, and without any packing on top of the frames. I now have 10 colonies in fine condition. I had only one swarm, and found three bee-trees. The past season has been a very dry one, and the drouth and forest fires cut my honey crop very short. I got only 230 pounds of section honey. A. P. Green.

McMurray, Wash., Oct. 12.

Bee-Keeping in Arizona.

I have had bees three years, and it is a very uncertain country here, as we have a great amount of wind in the spring—in April, May, and part of June—that chills and blasts the fruit-bloom every other year, at least. We can't count on much surplus honey, if any, until the alfalfa begins to blossom—about June 15—and from that time until Sept. 10 or 15 we have a pretty fair yield. There are quite a number of bee-keepers here that have from one to 20 colonies. We have an association organized on a small scale, with your humble servant as President.

My bees are in a strong and thriving condition. I use the Langstroth frame, 8 and 10 to the hive. I find that in working for extracted honey that the 10-frame hive is the best for our locality. It gives the queens ample room in the brood-chamber. I have extracted twice from my 10-frame hives this year, and only once from the others.

Joseph A. Lewis.

Taylor, Ariz., Sept. 29.

In Fine Condition for Winter.

This has been a nice fall for our bees. My 60 colonies are all in No. 1 condition for winter. R. E. Forbes.

St. George, Vt., Oct. 14.

Results of the Past Season.

Last spring I bought 10 colonies of bees, mostly in box-hives. I made two colonies, making me 12 colonies in all. This fall I took off 800 pounds of comb honey in one-pound sections, and have 12 of the Heddon hives nicely filled, ready to give the bees next spring if they need them. I have transferred most of the bees into the Heddon hive.

I am badly "stuck" on the New Heddon hive. I am satisfied that I can take care of 100 colonies in the Heddon hives easier than I can in any other hive I have ever used.

I have my bees all packed just as Mr. Heddon directs, and it looks now as though they would winter all right. The great drawback here has been in wintering bees. I have kept bees off and on, for the last 20 years. The nearest I ever came to wintering bees successfully was by Mrs. Lizzie E. Cotton's plan. Wm. Craig.

Luce, Mich., Oct. 18.

The Season of 1895.

I sold 200 pounds of my honey yesterday at 12½ cents, which is the first that I ever took to market.

This is my third season, and the first one to get any honey to amount to much. It was so dry here that our bees only made their living until July 20, when they began business in good earnest, and kept it up until Aug. 15. From 9 colonies, spring count, I secured 585 pounds of honey, and nine-tenths of it is very white. One colony that did not swarm filled 185 one-pound sections, and their work is first-class. They are in a 10-frame Langstroth hive.

I like the American Bee Journal very much, and have learned a great deal by reading it. I can see where others miss it by not taking it.

F. C. McClain.

Custer, Mich., Oct. 16.

Phenol Cure for Foul Brood.

On page 590, we find what W. F. Clarke tells the Mercury reporter about phenol as a cure for foul brood. I have had some experience with foul brood, but have not tried phenol, nor do I think I shall till I have better encouragement than Mr. Clarke gives. He says:

"The remedy was then published to the world. It was tried by many bee-keepers in Britain, on the Continent, in the United States, and by a few in Canada, *all of whom failed to make it a success.*"

He says this method is "scientific"—a term nearly synonymous with "humbug," when used in relation to patent medicines and patent rights.

I think the drug may "kill both the microbe and the spore" with which it comes in contact; but as every cell in the hive which has ever contained the diseased larvæ or foul honey, contains the germ of the disease, it must be necessary first to have the bees consume all the honey on hand, and then feed such quantity of medicated syrup as will fill all the comb in the hive. Very likely the disease may be held

in check so long as the bees are using the medicated syrup—which probably deceived Mr. Cheshire and Mr. Clarke; *but every cell in the hive must be disinfected before there can be a complete cure.*

Even if this treatment were a success, there would be a great obstacle in the way of its application here in this Western country, where alfalfa is largely grown, as we are likely to have a continuous light flow of honey from early spring till late fall, and he who finds his bees diseased in spring may have to wait six months before he can treat them, and then he finds he needs no remedy. I. W. BECKWITH.

Grover, Colo.

Bees Did but Little this Season.

Bees have done very little this season. I have 24 colonies. J. B. RESSLER.

Shellrock, Iowa, Oct. 11.

Kingbirds—Robber-Bees.

I have noticed what T. S. Ford has said regarding kingbirds. If they are what we have always called bee-martins, I would advise watching them closely, and if you don't want to be bothered too much with drones, let them go their way, for they are drone-catchers. If you don't believe it, shoot one on the wing when it flies up and makes its grab, and see what it has in its bill when it falls. Again, notice the time of day it does its work. Notice if you ever see them fly after bees early in the morning, or see them around after the bees kill off their drones. I have often thought, and yet think, that they often make a mistake and kill a queen, and leave a colony queenless.

If you have a colony robbing others, find the one doing the robbing, and break some of their comb, and see how quickly they will turn their attention to their home.

We have had another hard season in this locality—too dry. I will have to feed some for winter. ANDREW COTTON.

Pollock, Mo., Oct. 19.

Not a Favorable Season.

The past season was not very favorable for honey here—July was too dry, although I got about 1,000 pounds of comb honey from 30 colonies I had in the spring, and 20 new swarms. I live 45 miles west of Montreal, on the St. Lawrence river. The honey season is very short here.

ZEPH. BOYER.

Valleyfield, Quebec, Oct. 12.

Queens and Queen-Rearing.—If you want to know how to have queens fertilized in upper stories while the old queen is still laying below; how you may *safely introduce* any queen, at any time of the year when bees can fly; all about the different races of bees; all about shipping queens, queen-cages, candy for queen-cages, etc.; all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know—send for Doolittle's "Scientific Queen-Rearing"—a book of over 170 pages, which is as interesting as a story. Here are some good offers of this book:

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Greenville Bee-Hive Manufactory.—W. R. Graham, of Greenville, Tex., has bought back the Greenville Bee-Hive Manufactory, and will continue the business in his own name. Address him for catalogue.

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Convention Notices.

CONNECTICUT.—The fall meeting of the Connecticut Bee-Keepers' Association will be held Wednesday, Oct. 30, 1895, at the Capitol at Hartford. MRS. W. E. RILEY, Sec.

Waterbury, Conn.

CALIFORNIA.—The California State Bee-Keepers' Association will hold its next annual meeting in the Chamber of Commerce in Los Angeles, on Monday and Tuesday, Nov. 18 and 19, the first session commencing at 2 p.m. on the 18th. This meeting will be largely devoted to the subject of marketing our honey. A large and representative gathering is desired, for plans are to be considered that will have a vital bearing upon our future honey markets. JOHN H MARTIN, Sec.

Bloomington, Calif.

ILLINOIS.—The Illinois State Bee-Keepers' Association will hold its annual meeting at the State House in Springfield, Nov. 19 and 20, 1895. The I. O. O. F. have their grand encampment, beginning on Nov. 19, and they have secured an open rate of a fare and a third for the round trip, from all points in the State. So we hope for a large attendance and a good meeting.

The Special Meeting of the Illinois State Bee-Keepers' Association will be held in Chicago, at the New Briggs House, northeast corner of Randolph St. and Fifth Ave., on Thursday and Friday, Jan. 9 and 10, 1896—the week of the National Cycle Show—when excursion rates will be given. Notice will be published later as to whether these rates will be on the certificate plan or otherwise. Chicago hotel rates are 75 cents each, per night, two in a room; $1.00 if one in a room. Meals extra—pay for what you order, or go elsewhere for meals, if preferred. JAS. A. STONE, Sec.

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This department is only for your "Wants" or bona-fide "Exchanges," and such will be inserted here **at 10 cents a line** for each time, when specially ordered into this department. Exchanges for cash or for price-lists, or notices offering articles for sale, will not be inserted here—such belong in the regular advertising columns, at regular rates.

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I have this day sold to the A. I. Root Co., of Medina, Ohio, my business in Chicago, as "Dealer in Bee-keepers' supplies," together with the good-will of the same; and while thanking my many friends and customers during the past 20 years for their generous patronage, I would bespeak a continuance of the same for my successors, who are well-known manufacturers and dealers in apiarian supplies, and can fill all orders, whether large or small, with promptness and accuracy. THOS. G. NEWMAN.

Chicago, Ill., Sept. 16, 1895.

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35th Year. CHICAGO, ILL., NOV. 7, 1895. No. 45.

Contributed Articles.

On Important Apiarian Subjects.

Reminiscences of Rev. L. L. Langstroth.

BY REV. W. F. M'CAULEY.

When I was a mere boy, my oldest brother, 13 years my senior, became interested in bee-culture. I remember hearing him at that time speak of the "Langstroth" bee-hive. Little did I then think that I would eventually become the pastor of the inventor and be, for over eight years, perhaps his most intimate ministerial friend.

In 1886, I became the pastor of the Park Presbyterian Church, Dayton, Ohio, and in August, 1887, Bro. Langstroth—such was the geniality of his disposition that, notwithstanding his age, I always thought of him as "brother" rather than as "father"—moved to the city with the family of his daughter and her husband—Mr. and Mrs. H. C. Cowan. It was a delightful family circle of three generations that was thus added to my congregation. In this my first pastorate I received material help from association with Mr. Langstroth, whose good nature was always like an overflowing fountain, and whose friendship was "steady as a balance wheel."

After some years, my work changed to a new field in the city, where the foundations had to be laid amid unusual difficulties, and in that work he shared to the extent of his opportunity. His hopefulness and courage were sources of strength, and his confidences created a oneness of feeling between himself and his pastor, to the advantage of the latter. The temper of his mind, the general evenness of his judgment, and the fairness of his logical methods, made him valuable as a friend. He could enter sympathetically into another's experiences; and however much he might differ from you on some points, you were always sure of an unprejudiced hearing, and of a sweet converse that never descended to the level of a debate. His habit of scientific investigation led him to apply the same method to other matters: he did not seek to establish a theory, but to ascertain the facts. He was not a man to practice concealment, though prudent in the expression of his views: when he discovered a truth, it was a thing to be made known, not juggled with; hence, his friendship was a positive, not a negative, quantity. He was an all-round man, useful in any position, with a large amount of adaptability, a workman of skill, able for the blasting of refractory ledges, or for the fencing out of ecclesiastical quicksands.

I have long regarded him as a man of remarkable powers of mind, who could have risen to eminence as a preacher of the gospel, had it not been for the physical affliction that prevented continuous work in the pastorate. But who shall say that he did not really accomplish more, by the direction of Providence, through his scientific researches, conducted and given to the world, as they were, in such a religious mode? His career seems to me an instance of God's over-ruling wisdom, by which a life consecrated to general religious work was turned into a specific direction, that a great industry might be leavened with the thought of the Creator of all things.

While I am speaking only of Mr. Langstroth's latter years, I have thought it proper thus to give my impressions of the man himself, as gained from intimate association during the period when his individual characteristics could be studied in the light of his life work. He retained the vigor of his thought to the last, and took an interest both in religious and in general affairs. He was fertile in suggestions, and exhibited the inventiveness which had formerly characterized him; but the distinguishing characteristic of his closing years seemed to be an intense spirituality, and a warm-hearted interest in all religious work.

He passed through two periods of melancholy, resulting from his recurring physical ailment, while in Dayton; the first of these lasted, I think, about three years. At such times he did not have a single comfortable thought; but though he could not summon energy to undertake any task, yet his mind was still clear, and he held on by faith to the promises of scripture. It was a beautiful instance of simple trust through darkness like that of the "shadow of death." When undergoing these experiences, he cared to see no one, and if asked if he wished to converse with a visitor, would probably say, "No;" yet if any one were admitted unannounced, he could probably be led into conversation, and derive some benefit from the visit. When the attack passed away, his activity and vivacity were marked. It was like the shining of the sun after weeks of rain and gloom, when all the world seems new. It is probable that at such times he was tempted to overdo his strength, and doubtless attempted too much at times, in the rebound from a state of inaction and depression.

On one occasion, when calling in my study, I gave him a saying I had found somewhere—"It is right to *wear* yourself out, but not right to *tear* yourself out!" The phrase struck him as specially significant, and he used to repeat it with great satisfaction. In September of the present year, when on his way to the convention in Toronto, he and his daughter, Mrs. Cowan, spent a night in Toledo. The final attack of melancholy had passed away, and he was exercising as much self-repression as possible. The old phrase just quoted came up in the conversation, and I added a couplet of my own: "It is wrong to *rust* yourself out, but worse to *fuss* yourself out!" "Now," said he, "write all that down, and sign 'W. F. McCauley' to it, and give it to me." This I did, and doubtless he meant to make the sayings a rule for his own restraint in labor.

In the earlier part of his residence in Dayton, he used to call on me frequently, but, fearing that he might intrude on my time, was accustomed to limit himself in the length of his calls. I have known him to come in and say: "Take out your watch! What time is it? I just want ten minutes!" Then after several minutes' conversation, he would say: "Now, how much time is left?" "I will tell you just this incident." And he would leave, having spread around him a gleam of sunshine which it lightens one's heart to remember.

Having been brought up in the East, he had reminiscences of the Beechers. One concerning Lyman Beecher represented that noted divine as being found fiddling vigorously in his home when people were dying in the village from a pestilence. "Why, Mr. Beecher," said the horrified church officer, "how can you do this when there is such a scourge about us?" "I must fiddle or die!" replied Mr. Beecher. Said Mr. Langstroth, "His feelings were wrought up to so tense a pitch by the sorrow about him, that he felt that he must seek relief in the manner indicated." Even Mr. Beecher's fiddling was thus a testimony to the power of his sympathy.

On another occasion, Lyman Beecher overheard two ladies discussing him in a public place. One, in describing him, said that the hair on his head stood up "just like a hedgehog." Mr. Beecher marched up to a mirror, took a glance at himself, ran his fingers through his hair, and screeched out loud enough for all to hear: "Hey! Hey! Hedgehog, sure

enough!" to the great confusion of the lady in question, who did not know that he was present.

Mr. Langstroth told how, on one occasion, when outraged by enemies, he went to hear Henry Ward Beecher preach, and how the sermon led him into a different frame of mind. He went to Mr. Beecher and expressed his gratitude for what the preacher had said. As I recall, Mr. Beecher took him home with him. At any rate, he entertained Mr. Langstroth over night on one occasion, and in the morning cooked the breakfast for his guest, his own family being absent from home at the time.

Mr. Langstroth used to tell with great gusto an incident illustrating a type of Sabbath keeping that did not employ the religious opportunities of the day so as to make them a pleasure. "Oh, father," said a member of the family, "when shall we be through with this?" "Do you see that niche yonder in the mountain side?" "Yes." "Well, when the sun gets down to that, *the wust will be over!*"

These incidents show the genial nature of our friend, and his happy and companionable disposition, when in his normal frame. These were traits which appeared in conjunction with a deeply serious cast of mind. He could not fail to impress those who knew him with a sense of the distinctly spiritual trend of his thoughts. His life was an example of a massive purpose of soul, that towered before you like a mountain, and made you feel your own shortcomings; but there were groves of songsters on that mountain side, and laughing streamlets that leaped from rock to rock and spread themselves at your feet.

He sought to embrace every opportunity for doing good. He was specially concerned with the subject of ventilation, on which his ideas were most excellent and scientific. He once said jocosely that one of the worst of all cranks was the "ventilating crank," but he thought he might still do some good by helping to secure pure air in churches. He said that depravity in the pulpit and pew were bad enough, but that to have depraved air in addition was too bad. Through his suggestion, we were enabled to improve the ventilation of the old Park church auditorium without expense; and so thoroughly did he impress the importance of the subject upon me, that when we erected a new church on my second Dayton field, it was provided with a complete system of ventilation.

Toledo, Ohio.

(Concluded next week.)

California Bee-Keeping—Empty Combs.

BY DR. E. GALLUP.

In reply to Eastern people who ask why bees can not be kept in the valleys as well as in the mountains in this locality, I will give one case:

Mr. S. Q. Conkle lives 3 miles directly west of Santa Ana. He started in last spring with 23 3-frame nuclei. (Understand, he wintered them on the three combs). He has increased to 121 good full colonies, 8 of them having supers full of combs and honey. He has taken out 1,156 pounds of extracted honey, and sold between 400 and 500 pounds of comb honey. He had three swarms come to him, and purchased two old boxes with bees in them. One can get such from 25 to 50 cents each. All this increase was made with less than 10 pounds of comb foundation. He has now contracted for, or sold, 50 colonies of bees and combs, without the boxes (that is, the purchaser furnishes the boxes to put the bees and comes into), at $1.50 per colony, and received one payment. They are to be taken away by the first of January.

In many localities here in the valleys bees work all winter, but the honey is not of so uniformly good quality as mountain honey.

Mr. Conkle can now go to work and make his nuclei for next year's increase.

KEEPING EMPTY COMBS FROM MOTH.

Dr. C. C. Miller says that the bees will keep the moths out of their own combs. I say so, too, in ordinary seasons. But supposing we lose our bees, as many did here in 1894; then we must have some place to store the combs, and keep them free from the moths. We must always recollect, also, that America is quite a large country. Here in southern California moths breed in winter as well as summer, while with Dr. Miller they do not. Many times, when asking a California bee-keeper to subscribe for the American Bee Journal, his reply will be:

"I do not want it. It is all filled with stuff that is of no benefit to me whatever, What do I care about their wintering problem? And how could I follow Dadant's tiering-up plan? Why, I would have to tier up twelve supers high, and be to an immense expense in furnishing extra combs and extra supers, etc. Then, what do I care about their cultivating honey-producing flowers, when we have all the honey-producing flowers we can possibly use? All we want is the season to be just right."

Well, I am not finding any fault, but if I write an article occasionally that is particularly applicable to this climate, don't kick about it, and I will not.

Santa Ana, Calif., Oct. 16.

[I think that aside from the matters of wintering, tiering-up and honey-produing plants, any California bee-keeper will get more than the worth of his dollar if he reads the American Bee Journal. It is the earnest desire to suit every locality in the contents of the Bee Journal, and I believe that is as nearly accomplished in this paper as in any that goes to every part of the world, as it does.—EDITOR.]

What Dr. Miller Thinks.

THAT DELAYED REPORT OF 1894 seems still delayed. Nearly two months since the committee at Toronto said it should be furnished "at once." Mr. Benton said it was then ready, and, according to the Report, positively agreed to turn it over, but it has not yet appeared in print. Has Mr. Benton forgotten to keep his promise, or has the editor put the Report on file and forgotten it? [At this date (Nov. 4) I have not yet received it from Mr. Benton.—EDITOR.]

THOSE MISTAKES.—A fine list of them Friend Pringle furnishes in the Bee Journal for Oct. 24, and they're dished up in good shape. If I were in speaking distance, and were asked what other mistake might be mentioned, I would suggest that of being very positive one cannot possibly be mistaken in a matter in which there is an honest difference of opinion among the best bee-keepers.

WHO SHALL DECIDE?—At Toronto. Messrs. Pringle and Clarke agreed it was a mistake for editors to stop discussions at their own discretion. Mr. Clarke says: "If they allow a discussion to begin, it should not be cut off until it has been exhausted." But who is to decide when it is exhausted if not the editor? And in many cases one or both of the disputants might not consider it exhausted long after all the other readers felt sure no good could come of a continuance. Indeed, in many cases it might be a difficult thing to get all to agree just when a discussion was exhausted. One of the things an editor is for is to decide what should and should not be published, and an editor isn't good for much who hasn't the wit or the grit to use that power. [Doctor, some people have never been editors, you know, and some that have been, and are yet, have not the very best judgment. I know this one doesn't claim infallibility.—EDITOR.]

SPACING DEVICES.—Friend Abbott, on page 682, quotes an editorial from Gleanings which objects to having spacers a part of the hive, without giving reasons, and then without giving any reasons for his belief Friend Abbott takes the other side, saying he has reasons but won't give them until he hears the why of the other side. It might be interesting to know why Friend Abbott holds back his light. But then he has a way of preserving a very discreet silence at times. I've asked him questions easily understood, and have in vain looked for any answers thereto.

THE NEW NORTH AMERICAN.—That's a suggestive editorial on page 684. It suggests first the question whether there is, or is to be, a new North American, or, in other words, a union of the Union and the North American Bee-Keepers' Association. When are we to know about this? [Very soon. —EDITOR.]

Maybe it might be a good idea to have experiment stations as suggested, but I don't know. I certainly don't think it would be the best thing to have the reports of the experimenters, providing experimenters were secured, published with the report of the annual convention. The bee-periodicals are the place for such reports, to be given continuously, and not all in a lump. We want to be in close touch with experiment stations, knowing all the time what they're doing and what they're going to do. After we've had the reports all through the year it's hardly worth while to have them in the annual

report unless in a very condensed form. One of the reasons why I value the work of Experimenter Taylor beyond anything that has preceded him, is because I learn from time to time what he's doing, and he isn't shut up in a glass case out of the reach of practical bee-keepers.

How Much Brood in a Frame?—Chas. Dadant, on page 680, says: "His queens are thus expected to fill 10 combs with brood, or 78,000 eggs in 21 days, or 3,700 eggs per day." That's all right if the Quinby frame is meant, but if the Simplicity is meant, the numbers must be cut down a good deal. He counts 7,800 eggs to a frame, and that's about ¾ the number of cells in a Quinby frame; but a Simplicity frame ¾ filled would have only about 5,700.

Wild Teaching.—Very wild teaching is that quoted from Prof. Evans, on page 682, and well answered in the comments that follow; but the answer should appear in the Popular Science Monthly, and not in these columns. It's like casting pearls before—no, that's not the right figure—it's like carrying coals to Newcastle, for the merest tyro in bee-keeping needs no argument to make him know that the teachings quoted are wrong. If Mr. Abbott is trying to get some wisdom into the Popular Science Monthly, he's doing a good work.

Right of Bee-Territory.—That bright correspondent, F. L. Thompson, on page 682, says would-be bee-keepers should be courteously warned away from fields already occupied, but he comes parlous near saying the would-be bee-keeper needn't pay any attention to the warning after he has once started in with a few colonies. One of the troubles about bee-keeping is the uncertain tenure by which the bee-keeper holds his ground. The law settles where a man can farm and where he can fish, but it doesn't say where he can catch flies or gather honey. If either business should be deemed sufficiently important, the law may some day have something to say about it.

Questions and Answers.—That lone half column at the top of page 682 looks rather strange compared with the two pages or thereabouts occupied in some previous numbers. Have the questions sent become so hard that no answers can be found to fit them? or have all the readers become so well informed that they have no more questions to ask? I suspect the fact is that beginners are more interested to get answers to the practical questions that confront them while they are most busily engaged at work with the bees. The wise student of bee-culture will spend some time during the winter months in providing himself in advance with information to be put in practice the following summer. Especially will he familiarize himself with a good bee-book.

Patenting Old Things.—L. Dickerson, page 688, says he had half a notion to patent his hook for hanging the smoker. Possibly he might get a patent, but it would hardly be worth anything, for the same thing has been invented by a number of persons, and was in use long ago. Before taking the trouble to get out a patent, always find out whether the thing is new.

What Heat Spoils Honey?—The answers on page 691 show that we are lacking in definite knowledge as to the effects of heat on honey, and there's a field for investigation. I commend it to our industrious friend of Lapeer, providing he wants to occupy some of his winter hours in that direction. How much heat will honey stand without at all affecting its flavor, providing the heat be continued only one minute? If 5, 10 or 30 minutes?

Clipping Queens' Wings.—Whether I agree or not with my Canadian friend in the views he expresses on page 686, his ingenuity in developing a theory, and his skillfulness in making use thereof, excite my hearty admiration. I had fondly hoped that I had given him a question that was a "settler." But he comes up smiling as ever, not in the least fazed.

The theory is that a queen keeps up her strength of wing by a sort of gymnastics inside the hive. The plea is that "when the queen finds that she has only half her wing-power left to her, and that it is awkward to swing it without its mate, she quits putting her wing machinery in motion, and it falls into disuse." Then disuse brings deterioration, and finally extirpation.

But there is proof needed that when a wing is clipped, that would discourage her from going through her daily Delsarte. A horse that has his tail docked continues to switch the stub just as vigorously as if it did some good. Moreover, the wings on one side are left whole, and those on the other side are only partially cut away, so that nothing hinders the queen from going through the motions just as well as before the clipping. None of the muscles of the wings are disabled.

But the greatest trouble is that the theory on which the argument is based has itself, I think, no foundation in fact. I have watched queens thousands of times—watched them sometimes for a long time, watched them while they were laying, and watched them while walking over the combs—and I don't remember ever having seen a laying queen move her wings at such times. If it is a regular thing, it seems to me I ought at least a few times to have seen queens in the act.

In this connection I may appropriately call attention to the fact that in some cases it seems the natural thing to make a queen wingless after she begins to lay. Sir John Lubbock says: "The queens of ants are provided with wings, but after a single flight they tear them off." I do better than that. I cut them off. Besides, I don't leave a queen entirely wingless, but leave all except part of the wings on one side. I'm not as bad as the ants. Marengo, Ill.

The Strawberry Subject Again.

BY ED JOLLEY.

By offering a compromising suggestion between the opposing factions of the bees-and-strawberry controversy, I have gotten Dr. Miller after me with a sharp stick. He says he either does not understand me aright, or I certainly don't mean what I say. Now I want to assure the Doctor that I mean just what I say, and will here give my position, and wherein the Doctor finds me wrong, will he be so kind as to set me aright?

The strawberry is a member of the first of the three divisions of the rose family. To the common wild rose the botanists have traced its origin. In fact, nearly all our common fruits have evoluted from the same source. We will first take the common wild rose and see how it is constructed, and then see what subsequent cultivation has done for it.

We find it a perfect flower with many stamens and pistils, surrounded by a single row of petals. Roses had been domesticated and cultivated, and nearly all the colors of to-day had been brought out as far back as Emperor Nero's time. Yet the stamens and pistils, and single row of petals had remained unchanged for many centuries after this. The changes we find in the rose to-day are due to the discoveries of the botanist Linnæus. He discovered that by destroying all the stamens on a single rose-bush, and supplying the pistils of these same roses with pollen from the stamens of another bush, he had in the succeeding generation from the seed of these roses a rose that had, instead of a single row of petals, a double row, and that the stamens were correspondingly scarcer. This work has been carried on with the rose until the stamens have become very scarce, and in many of our fine roses there is absolutely no stamen. In many others the stamens are imperfect and undeveloped. Occupying the place around the pistils, which was formerly occupied by the stamens, is a little fringe of imperfect and impotent stamens. We can now see what changes scientific cultivation has made in the flowery progenitor of the strawberry. We will go over the ground again this time with the strawberry, and see if there has not been some wonderful changes wrought by cultivation in its case, too.

We will take the common wild strawberry, and by a comparison of its blossoms with the common wild rose, we find we have a miniature likeness of the rose in detail of construction; many stamens and pistils surrounded by a single row of petals. We have seen how the cross-fertilization has doubled the petals of the rose at the expense of the stamens.

We will note the result of cross-fertilization in the strawberry. Here we find the newly-added vigor increasing the size and quality of the fruit instead of doubling the petals of the blossoms. We also find that in the succeeding generation, from the seed of this new strawberry, the stamens like those of the new rose, are correspondingly scarcer. This work has been carried out with the strawberry until what was formerly a plant of double sex (hermaphrodite), with perfect blossoms, is now a plant of single sex, with imperfect blossoms. That is, the two sexes of a variety are on different plants and blossoms.

Now, has Dr. Miller never noticed in his strawberry patch, nice, thrifty-looking plants which bloomed as profusely as any of the rest, but failed to set any fruit? These were staminate plants, and if he is careful to cut runners from these plants only, and plant them by themselves, he will have a patch that will bring forth all staminate blossoms. He

might as well expect a nest of goose-eggs from a flock of ganders, as to look for strawberries in this patch.

The Doctor asked me if I could raise a crop of Crescent strawberries with no staminate blossoms within a mile. Yes, sir; I can raise a crop of strawberries from any pistillate plants, if there were no staminate blossoms within 10 miles.

As he seems to be rather skeptical about all varieties producing both staminate and pistillate plants, I will defy the Doctor to send me any variety of strawberry-plants that I cannot return to him within two years—plants of the same variety that will be either all staminate or all pistillate, or both kinds, if he wishes. Of course it is understood that I do not mean any of the so-called pistillate varieties, for they have no stamens, owing to the originator accidentally failing to cut any runners from the staminate plants, and as no staminate plants were ever sent out, they were accepted as a pistillate variety, but they are only accidentally so, not naturally. But any varieties, such as the Wilson or Jessie will do.

Franklin, Pa.

The Swarming Habit—Breeding it Out.

BY BERT LOWNES.

Since Dr. Miller, on page 582, disagrees with my article on "The Possibility and Desirability of Breeding Out the Swarming Habit," on page 549, I shall ask the readers to bear with me in an attempt to defend my former article, and also to point out more clearly, if possible, the impossibility as well as the undesirability of breeding out the swarming habit.

Notice in my previous article that I maintained that swarming is not, properly speaking, a *habit;* and although I am still of the same opinion, I shall, for convenience, speak of the bees' desire to swarm as "the swarming habit."

Before going into detail, however, I wish to say that I write this article, as I wrote the other, entirely without malice or unkind feelings toward Dr. Miller or any other person. I simply wish to present my views on the question, and leave results with the readers.

First, Dr. Miller finds fault with my statement that "the desire to swarm has existed ever since the bees were created, and, I can truthfully say, will exist until they become extinct." Now, if I had said, as I should, "and I *believe* will exist until they become extinct," it is quite probable that he would have passed it by without comment.

Further on he says: "Even supposing he proves that bees have always swarmed, he will need to prove that they will swarm, and always have swarmed, when not at all crowded," etc. No! I think not. It is *not necessary* that I prove that they always will swarm, "when not at all crowded," or that they *always* have swarmed, under the same conditions, in order to prove that it is impossible to breed out the swarming habit. If that were the case, I might as well quit right here, for it has *already* been proven that they have *not always* swarmed when "not at all crowded," but though they did not swarm, neither was the swarming habit bred *out*. Suppose that I can *not* prove that bees always *will* swarm. Can Dr. Miller prove that they will *not* swarm? Suppose I cannot prove that bees always *have* swarmed, "when not at all crowded." Can Dr. Miller prove that they always have *not* swarmed when not crowded? or can he prove that those that *did not* swarm, would still refuse to swarm on *being* crowded?

Since Dr. Miller advances no argument to prove that the swarming habit *could* be bred out, I think I am slightly ahead on that score.

Now for the next: "As to the desirability of getting rid of the habit, he is not so positive. He only *thinks* that no drones would be reared if there were no swarming. But others may *think* they would be reared if swarming were forever to cease, so the matter of desirability stands just as it did before."

I cannot agree. I am *just* as positive that it is not desirable to breed out the swarming habit as I am that it is *impossible* to do so; what I am not so positive on, is, whether or not drones would be reared. Even if that were the only undesirable feature in breeding out the swarming habit, the fact of my *thinking* they would not be reared, and some one else *thinking* they *would*, does not leave the question of desirability as it stood before, *unless* our arguments were equal. Suppose Mr. A. (not Abbott) should steal a horse. B. has him arrested, and he is asked, "Did you steal that horse?" He answers, "No!" B. is then asked, "Did A. steal that horse?" He answers, "Yes." Now because A. says *he* didn't, and B. says he did, will the matter be dropped there? Hardly. The matter will be settled according to the arguments that A. and B. set forth.

There are a great many reasons for believing that breeding out the swarming habit would be undesirable (some I shall speak of later on), of which the following is not the least: It is impossible to improve upon Nature by working directly in opposition to her laws; therefore, the bees cannot be improved by having the swarming habit bred out, and without improvement it is not desirable.

Lastly, Dr. Miller speaks of "the encouragement in knowing that Mr. Lownes has faith that it is both possible and desirable to prevent swarming;" but adds that his faith in that line—the line of possibility—"is not as strong as it once was."

First, I will call attention to the fact that my statement in regard to the prevention of swarming was exactly as follows:

"While I believe that it is not possible or desirable to breed out the desire of the bees to swarm, I do believe that it is both possible and desirable to perfect a plan whereby the *prevention* of swarms will be a practical success; but even then I think there would be a *few* exceptions, owing to the strong hold the swarming instinct has on the bees." Mark that last clause. Now I wish to make this statement:

Inasmuch as the prevention of swarms is necessarily the first step to be taken in breeding out the swarming habit, there cannot be the slightest hope in the possibility of breeding out the habit until we succeed in learning a plan that prevents swarming to *absolute perfection*. (Even though we knew of such a plan it does not follow that breeding out the swarming habit would be possible.)

Now notice Dr. Miller's answer to the query on page 419: "As it is not essential for the existence of a colony, and as some bees are more given to swarming than others, I don't see anything impossible in having bees not given to swarming at all....."

As I mentioned before, his faith in the possibility of *prevention* "is not as strong as it once was;" on page 406 he says, in regard to "How to prevent swarming"—"That's always an enticing question, but one gradually learns not to expect too much from it." Could anything be more contradictory? In his answer to the query he does not see *anything* impossible in having bees not given to swarming, but still he hasn't a great deal of faith in the *prevention* of swarms. Just imagine a bee-keeper approaching Dr. Miller, and saying: "Well, Doctor, I have at last succeeded in having the swarming habit bred *entirely out* of my bees, but for the life of me I can't hit upon a successful plan of *prevention*."

Now I believe I have met all of the Doctor's objections; I shall therefore proceed next week to point out more clearly the impossibility and undesirability of breeding out the swarming habit of the bees.

Charter Oak, Iowa.

(Concluded next week.)

One Dollar a Year is a "dirt cheap" price for a weekly like the American Bee Journal. I think everybody who is at all familiar with it admits that statement. Comparing it with the price of almost every other bee-periodical of to-day, it should be $2.00 a year. Granting that, each subscriber will readily see that the Bee Journal publishers are saving him or her just $1.00 a year. Now, in return for that, why not each reader resolve that each year he or she will procure at least one new subscriber for the Bee Journal? Surely each could do that, at least for a few years. Besides furnishing a low-priced paper, the publishers are willing to pay liberally for the work of getting new subscribers. As an evidence of such fact, see page 722 of last number.

The American Bee Journal is trying all the time to work for *your* interest. Why not you try to work for *its* interest? That is a mutual affair that ought to be self-commendable.

Earn Your Own Subscription.—Any present subscriber can earn his or her own subscription to the American Bee Journal for one year by sending *three new subscribers*, with $3.00. A copy of "Bees and Honey" will also be mailed to each new subscriber, and the Bee Journal will be sent to the new readers from the time the order is received up to the end of 1896. This is an easy way to earn your own subscription and at the same time help to circulate the Bee Journal. Remember, getting 3 new subscribers pays for your own subscription for 1 year! Of course, no other premium will be sent in addition. This is a straight offer by itself.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

Preparing Full Colonies for Shipping.

Dr. W. Le Gette, of North Carolina, asks: "What is considered the best manner in our climate, in December, to prepare full colonies of bees for railroad shipment? The hives I shall ship are quite full of bees and honey."

ANSWER.—One of the greatest requisites in shipping bees is *plenty of air*. This is a *sine qua non*. The best packing will fail unless the ventilation is right. If the distance is short, and the frames in the hive are well propolized, all that would be necessary is to remove all supers, and, after laying two sticks of wood about one inch in diameter across the tops of the frames, tack wire-cloth over all. Open the entrance to its full extent, and tack wire-cloth over it. If possible, have the hives put in open cars, with the frames running with the length of the car.

If the bees are to go 500 or 1,000 miles, I would prepare them differently. First, pick your combs; see that they are well secured to the top and sides of the frame. If they are full of honey, they should be secured to the bottom-bar. Crowd in bits of old worker-comb to fill out. Secure each comb in the frame by the use of such small sticks as are used in transferring. I fasten these sticks together by fine annealed wire. Use from three to four pair of such wired sticks to each comb. Spread the frames wider apart than what they should occupy in the hive, even if you have to use a frame less. When all are ready, I place them in a one-story hive or shipping-box, with from 8 to 12 two-inch holes bored in the ends, sides, top and bottom, and cover with wire-cloth. Across the center of bottom I have a *notched* strip. These notches hold securely the bottom-bars of the frames. Tack bits of wood between the ends of the top-bars of the frames so that they keep their distance apart. Now screw cleats across the ends of the frames to hold them firmly. Nail or screw strips across the outside of both top and bottom, so that the holes for ventilation cannot be closed by contact with other objects.

I have shipped bees packed in this manner to California, that arrived without a single broken comb, in perfect order.

Cotton-Bloom a Honey-Yielder in Texas.

DR. BROWN:—I notice that J. J. Keith, of Kentucky, on page 516, said that bees do not work on cotton-bloom. How about this, anyway? Is it possible that bees don't work on the cotton-bloom in Kentucky? Why, the bee-keepers here in Texas think that cotton is one of our very *best* honey-plants; I never knew it to fail to furnish some honey, and the honey is of the very finest quality, too. Bees work in the cotton-bloom, and also on the underside of the bloom and squares where the nectar secreting glands are formed. I have often seen drops of nectar form in these glands during the night, half as large as a buckshot, and by going early in the morning, before bees and other insects get to stirring, any one can very easily gather a teaspoonful by hand of this beautiful nectar, which is as clear as spring-water.

Now, can it be possible that such a honey-yielder as this plant is here in Texas, will not yield up its sweets in Kentucky? I would be pleased to hear from other bee-keepers in the cotton-belt of Kentucky on this subject.

Bees have not done much in this part of the country this year. I have taken a little over 1,000 pounds of extracted honey from 40 colonies, spring count, and increased to 50. We will get no fall honey here this year, on account of drouth.

Lometa, Texas. L. B. SMITH.

The International Bee-Keepers' Congress.

This gathering meets at Atlanta, Ga., Dec. 4th and 5th. The Exposition at that time will be at its best, and the railroad rates the lowest. It will be a large convention of bee-keepers. Make your arrangements to go.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Carniolans Mated with Italians.—"A Carniolan queen mated with an Italian drone produces a very fine and desirable bee. I have a number of such colonies that are very fine workers, and are easy to manipulate."

I quote the above from a little pamphlet which I published in 1886. My attention has been directed to this by the account of Mr. McArthur's bees, which appeared in the Bee Journal not long ago. I found these bees to be the most desirable ones I have ever owned, all things taken into consideration. They were at work early and late, had their hives full of bees, and ready for business at any time. They were easily handled, as they stuck very closely to their combs. I think a test of these bees by the producers of large crops of comb honey will cause them to grow in favor, and I am not sure but this is the mission of the Carniolans in this country—to add desirable traits to the Italians.

Getting Queens to Go Up.—"I see there are some doubts and failures about getting queens to go up into the story above. I have very little trouble; for when a brood-chamber is becoming crowded I remove two frames of sealed hatching brood from below, placing combs in their place below, putting these two frames of brood in the center, and filling in combs on each side. I then scarcely ever fail to get the queen up there, and I have had them up in the fourth story the past season."—JOHN CRAYCRAFT, in Gleanings.

This agrees with my experience exactly. I have never found any trouble about their going up, but I have had some trouble to keep them and the bees down in two-story hives, run for extracted honey, without queen-excluding honey-boards. When I was running my apiary for extracted honey in this way, I frequently found hives in the fall with all of the honey, bees, and brood in the top story, and nothing in the lower story. They seemed to have moved up, bag and baggage, and left the lower part empty. Such colonies, if left alone with plenty of honey, invariably came through the winter in good condition. There was a bee-space over the tops of the frames, and the bees never failed to seal the cover down tight.

Introduction to Botany.—Some of my readers have no doubt had an experience like the following: They have sat down at the table of a generous host, with a well-developed appetite, but when the plates were passed and they beheld the bounteous supply of rich, delicate, appetizing food with which they had been served, overwhelmed and in suspense, not knowing where to begin nor how they could possibly do justice to all that was placed before them. I had something of this feeling when I got clearly before me the table of contents, and saw the admirable and scholarly manner in which each subject is treated in a "Guide to the Study of Common Plants," or an "Introduction to Botany," by Volney M. Spalding, published by D. C. Heath & Co., Boston, Mass.

This is a revised edition of a little book which was published a few years ago. It sells for 90 cents, and contains about 300 pages only, but every page is packed with information. Any student of botany who invests his cash in this book is sure to get the worth of his money. The wonder to me is that so much information could be condensed and packed into so little space, and be sold for so small a sum of money.

The book is intended for students in schools, who can have access to all the apparatus needed to carry on the study of the subjects perfectly, but anyone who has a love for Nature, is interested in the study of plants, and desires to secure accurate information of the same, will be interested in the work, and will find it a perfect mine of suggestion and practical information. Some such a work should furnish the basis for the study of botany in every academy and high school in the land. I have space to indicate the scope of the work very briefly only.

The first lesson is on "Seeds," and in connection with it

a list of the books of reference needed is given, so that the student who wants further information, or desires to verify that which is given, will know just where to look. The pupil is introduced to the analytical method at once, and is thrown upon his own powers of observation, as every student should be. He soon learns that he is not to study *about* seeds, but *seeds*, and a list of the different kinds of seeds needed forms the first part of the lesson. With these seeds before him, he is introduced to the various parts and functions of seeds, and the technical names by which they are called. At the end of the book is a glossary of the terms used, as well as a complete index. It is a pity, it seems to me, that the proper pronounciation of the difficult names could not have been given also.

After seeds, the student is introduced to root, stem, leaves, flowers, etc., in the same way. Then some of the important Families of plants are taken up, and their leading characteristics pointed out in a way which is sure to impress them upon the mind of the seeker after information.

I wish I had space to say more, but will say in a sentence, that I think the book admirably suited to the work it proposes to do, and at least every young student of botany should own a copy.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Epilobium Honey—Bee-Space Between Frames and Cushion.

I am very sorry that the express company managed to smash the section of honey I sent you, but I do not regret very much your not being able to give me a remedy for brace-comb building. I do not not think the cause was overcrowding, because I had two supers on, and they were only working in part of one them.

The honey I sent you was pure epilobium—there is nothing else in this new country for surplus honey but epilobium.

Is it advisable to leave a bee-space between the frames and cushion? I did so with my bees. A. P. G.
McMurray, Wash.

ANSWER.—All I have to say about epilobium is, that I wish my bees had a big lot of it to work on, if they'd always store as nice honey as the section you sent.

I suppose you mean that you put a Hill's device or something on top of the frames before putting on cushions, so that the bees could have a free passage over the top-bars from one comb to another. I believe the plan is good, if the top-bars are so clean that the cushion would fit down close enough to prevent the bees passing over. Sometimes there are so many burr-combs on top of the top-bars that there is no need of anything being put over.

Best Size of Frame and Hive—T Supers.

I have been using the 8-frame Quinby hive, and a hive 14 inches square and 11¾ inches deep, and the latter gave me decidedly the best results.

1. What size frame and hive would you recommend, for both comb and extracted honey? Your answer will probably be: "Use the one you like best, and the one that gives the best results." But how am I to know that, unless I test them all? That would take long years of hard study; it would take money; and another thing, a person would never get done.

2. Don't the bees stick the bottom of your sections with propolis, with the T-super arrangement?

3. Don't the T tins ever sag? A. B. G.
De Soto, Mo.

ANSWERS.—1. I have some doubts whether I will ever change from the size of frame that is in most general use, and on that account may be considered standard, the frame 17⅝x-9⅛. Not that I think it *is* standard. I may say that most of my frames are 18x9, and I don't think any difference could be recognized between that and the standard as to results, but all my later frames are of standard size, just for the sake of having that which comes nearest being standard. If I believed any other size would give better results, of course I would change to it, and I've no quarrel with the man who prefers a different size.

2. Sections filled during a good honey-flow, and taken off early enough in the season, are not troubled with propolis. Left on late—especially left on in the fall when the bees harvest more glue than honey—there will be glue on the bottoms of the sections as well as on the other parts that are exposed, and I don't know of any arrangement that will keep the sections free. I formerly used very extensively wide-frames, and with them the enttre bottom of the section is covered as fully as can be by any kind of device. But the bees could always crowd in propolis between the section and the bottom-bar of the wide-frame, and in the early part of the season they'd crowd propolis in there when they wouldn't think of daubing the exposed bottom of the T super. You see, the bees try to fill up cracks when they don't think of disturbing a plane surface. Later in the season, when glue is so plenty that they daub it everywhere, then it will be daubed over the whole surface of the section bottom in the T super, but in the wide-frame only along the edge.

3. No, T tins never sag. You see it is much the same as if there were a bar of iron half an inch thick to sag, for the upright part is half an inch. It must bend to one side before it will sag, and the flange each side prevents it from bending to one side. I don't believe a T tin would sag if 20 times the usual weight were put on it.

Worker-Bees and the Control of the Sex of Eggs.

On page 650 Mr. Abbott tells of an experiment where bees were almost absolutely known to carry eggs, and that the eggs produced both workers and drones. Did the idea ever strike you that it might be the workers which control the sex of the eggs, in the same manner that they control the rearing of queens and workers? If they can take an egg and produce either a queen or worker at pleasure, why may they not be able to produce a drone as well? Please give us your idea of it. W. S. F.

ANSWER.—Some years ago that thing was suggested, but I think there has never been any proof that bees have made such a change on worker-eggs that drones were reared from them. You see, in the case of a queen being reared from an egg or a larva that under ordinary circumstances would have produced a worker, there is no change of sex. It is simply a matter of greater or less development. If a worker should be changed to a drone, there would be a change of sex, and the change would have to be made in the egg. The difference between a worker and a drone egg is that the worker-egg is fecundated and the other not. The spermatozoa enter the worker-egg through a very minute hole, so small that the workers have no tool sufficiently delicate to extract them. After the larva has hatched out of the egg the change would, if possible, be still more difficult, for the larva would, I suppose, have to be dug open to make the change, if any change were possible.

Bee-Associations—Granulated Stores.

Heretofore I have found just what to do when in any difficulty about my bees, by consulting my bee books and papers, though six years ago I knew nothing about bees, and have never seen an apiary where the people knew even as much as I do about the best ways!

Suddenly we find ourselves—my neighbors and I—with *lots* of honey to dispose of. We sold three carloads at one time this summer, in 24-pound boxes that cost us 20 cents each, which I have found was *much too much* to pay for them; and our sections cost us $4.50 a thousand. But worst of all in this mismanaged bee-community the people sold their honey

for just what the buyer said he wanted it for. Now, to right all this, I must try to get up a bee-association.

1. Will you tell me how such an association is conducted, and what its good is? I do not know a thing about it, only I imagine that as many people as are interested in bees meet together and agree to sell their honey at one price, and get their bee-fixtures at the same place in quantities.

I have 70 colonies of bees, and got nearly 6,200 pounds of *mostly* alfalfa honey in the sections, and about 20 gallons I extracted from partly-filled sections, and put back the supers on the hives. I winter my bees on the summer stands, with newspapers over the canvas that is next to the bees (or if I leave on a super it would be next to the super), and I find the bees winter best with all that space above.

2. Last spring, early, I looked at my bees; they seemed in fine condition, but much of the honey had candied. Later on I found that they had a good many dead bees in front of the hives, and all the honey gone from the brood-frames, or nearly so. I fed them a little, and the blooms came, and I did not lose a colony, but I had but one swarm. Will you please tell me if the honey candied because the boy let the irrigating water run under and around my hives so the ground was damp much of the time?

3. And do the bees carry out the candied honey? Is it of no use to them?

I have always left the brood-chamber of the hive alone without taking a single frame away in the winter.

Excuse me for writing so much. My only excuse is that it is not half as much as I would like to say.

Delta, Colo. SPINSTER.

ANSWERS.—1. Having a very kindly feeling toward spinsters, especially bee-keeping spinsters, I shall take pleasure in answering your questions, and only wish you would send on the rest that you held back. But I'm a little afraid I can't be of very much service in answering your first question. I've belonged to a number of bee-keepers' associations, but none of them ever had anything to do with controlling the price at which members sold their crops, neither had they anything directly to do with purchasing supplies. I'm not sure whether a combination of any kind would make much difference in the matter of purchasing supplies, unless it would be for a number to unite together to get a lot of supplies at the same time so as to save freight on large lots. Certainly it seems to me you ought not to pay double price for goods, and if you will look in the advertising columns you will find plenty of places to buy supplies at lowest rates. Sometimes you can buy near home at regular rates and save freight.

I don't believe you can make it work to form a combination that shall agree not to sell below a certain price. Suppose you agree that 12 cents is your price. You may hold on to your honey, but if there's plenty of honey to supply the market from other points, and if that is sold at 11 cents, you must either come down to 11 or keep your honey. Still there might be something done by organization, and all that's necessary to do is to make a call through the bee-journals or by letter, and get the bee-keepers together. But an association has already been formed in your State, and after a good deal of leafing over of the pages of this journal I find the association held a convention last January in Denver. H. Knight, of Littleton, was Secretary, and by writing him you can probably find out all about it.

As to the good of bee-keepers' associations, I think the chief good is in the discussion of practical topics, and in the meeting and getting acquainted with other bee-keepers.

2. I hardly think the water about the hives had anything to do with the granulation of the honey.

3. The bees use the liquid part of the honey and carry out the dry grains. Possibly they may make some use of the grains sometimes.

A Super-Arrangement for Sections.

I wrote you a short time since of my intention to change the internal arrangement of my supers. I will state further, so you may understand what I wish to be answered, that I wish a section-holder with *top and bottom bars* corresponding in width to the sections used; *end-bar* the same, but thin enough for a bee-space between their ends and the super wall; top-bar projecting and resting on metal rabbets as the frames in the brood-chamber; bottom-bar hinged at one end, and fastened at the other by some simple device. The great object to be attained is to be able to shift the sections singly, or grouped, with facility, and that, too, without taking off the super or killing bees.

1. To what extent, generally, are section combs bulged so as to be beyond crating?

2. Will my supers have to be deeper for the holders mentioned, in order that the usual bee-space be between the top of the brood-chamber and the super?

3. In your view, if there are no advantages in the super-arrangement I have described, please say so. W. L.

ANSWERS.—1. That's a hard question to answer in a single sentence. Among my sections you'll not find one that is bulged so as to give trouble in crating, but then I use separators, and perhaps you refer to sections without separators. If no separators are used, there's a great difference as to the amount of bulging. Some claim there is hardly enough to make it worth while to have separators, and some will have one in every ten bulged. I think it makes a difference as to the way the honey comes in. If it comes in a flood so that the bees are busy at work all through the super, then the sections will be evenly built without any separator. If, on the other hand, honey comes in quite slowly, they will be slow about working the outer sections, preferring to lengthen the cells in the sections already started, and that will make bulging. I think likely there will be less bulging if the bees are a little crowded for room.

2. Yes, if I understand you rightly, you'll have to add as much to the depth of your super as you have added by the thickness of the added top-bar.

3. There's lots of fun in getting up some new invention, and of two things equally good the one invented by yourself will suit you best. So I think you may be pretty well suited with the arrangement you mention. Indeed, it's pretty much the same as the single-tier wide-frame, which has done excellent service, although I laid it aside for the T super. The main, if not the only, difference, is the hinged bottom-bar. I doubt if you'll like it so well after trying it. The expense and bother will overbalance any advantage. If I were going back to the wide-frame, I should have all solid, and have a space of ¼ inch between the top-bar and the tops of the sections. Of course that would make the frame and the super both ¼ inch deeper.

Perhaps it's none of my business, so long as you haven't asked me about it, but my experience in shifting sections about from one place in the super to another doesn't make me favor it greatly. Counting time and trouble, I'd rather let the bees finish up a section just where they began it—all but a few of the outside sections—and when only these are left unfinished I'd take off the super, then fill up another super with the unfinished sections from a number of supers, and give them back to the bees to be finished.

Watermelons for Bees.

Are ripe watermelons good for bees? G. B.

ANSWER.—I know nothing about it from experience, for in this region it would be a good deal cheaper to feed granulated sugar; but I've read of at least one man in Germany feeding them to bees in large quantities.

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

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Editorial Budget.

Hon. Eugene Secor and Wife—of Forest City, Iowa—were in Chicago a week ago last Saturday. I had a very pleasant chat with them. They had been visiting the Atlanta Exposition, and after spending a week or so among Indiana friends, they expected to return to their Iowa home. Mr. and Mrs. Secor have a son here in Chicago who is fitting himself for the title of D. D. S.—"Doctor of Dental Surgery." He's a veritable "chip off the old block," as the saying goes, and consequently will be a success.

"Father" and "Mother" of Bee-Papers.—Some one has, within the past few months, charged the American Bee Journal with being the "father" of new bee-papers, and Gleanings the "mother." That all sounds very pretty, but so far as the Bee Journal is concerned, it is quite willing that Gleanings shall have all the honor (?) there is in such a figurative statement. But I am sure if there's anything in the principle that "like begets like," then all the new bee-papers started within the past three or four years will have to look elsewhere for proof of parentage, or like Topsy in "Uncle Tom's Cabin," conclude that they simply "growed." They are nothing "like" Gleanings or the American Bee Journal.

Chicago Honey Prices are not so high as some would have bee-keepers believe—nor as high as they ought to be. Fancy comb honey at this date (Oct. 28) will *net* the shipper very little, if any, more than 10 cents per pound; and extracted honey probably half that amount. All talk of getting 16 or 17 cents per pound for any kind of comb honey in this market is senseless.

The two carloads of fancy alfalfa comb honey, from Utah, mentioned last week, were bought outright by a firm here at 10 cents net per pound.

The bee-keeper that can get 12 or 15 cents per pound for his comb honey in the home market should be wise enough to sell it there, and not ship to a distant city market.

The profits of bee-keeping, I believe, will never equal what they might, and should, until there is some sort of organization among producers for the sale of their honey crops. I hope to see the day when there shall be in Chicago, at least, a large and responsible honey company, in whom bee-keepers will have every confidence, and from whom local grocers and other dealers can buy their necessary supply with the satisfaction of knowing they are always getting what they pay for, and not some infernal adulterated stuff.

Some Langstroth Reminiscences are begun on page 709 of this number of the Bee Journal, kindly furnished by a former pastor and intimate friend—Rev. W. F. McCauley, now of Toledo, Ohio. To those who never had the delightful pleasure of a personal meeting and acquaintance with Father Langstroth, these reminiscent articles will be a source of much interest and profit. Another article next week will complete what Mr. McCauley has to say about him whom all who best knew also loved best.

It is quite possible that on account of Father L.'s periodical visitation of head-trouble, which so often really "laid him low," bee-keepers never came to know his wonderful power and breadth of mind, and beautiful and kindly traits of high Christian character.

As we learn more and more about his unselfish, devoted life, let us all endeavor to emulate the example the great and good Father Langstroth set before his fellowmen when upon earth. Thus shall the influence of his noble thoughts and deeds live after him to bless and uplift the world.

Wild Buckwheat (Eriogonum fasciculatum) is considered by Mr. J. H. Martin—the California "Rambler"—as one of the best honey-plants. Prof. Cook thinks he is correct. The plant is very abundant there, and remains in bloom for a long time. So says the Rural Californian.

You Can Help to increase the Bee Journal list of readers greatly by recommending it to those of your bee-keeping friends who do not now take it. Some have already done this, and I want to thank them most sincerely for it. I do appreciate it, and shall strive harder than ever (if that is possible) to show my appreciation by improving the old American Bee Journal as much and as fast as I can and still make an honest living. If only *all* who owe on their subscription would soon pay up, and in advance for 1896, I could then plan for greater things for next year. But, all being well, the American Bee Journal for 1896 will far exceed anything that has gone before. "Forward" being my watchword, health permitting, and all assisting by their recommendations and dollars, the "Old Reliable" *must* be shoved up another notch for 1896.

Will *you* help to do it?

Miss Emma Wilson, of Marengo, Ill.—Dr. Miller's able helper in the apiary—was in Chicago Oct. 26. I had the pleasure of a few minutes' visit with her at the depot, while waiting for the train. Last fall they had to feed about $75 worth of sugar to their bees for winter stores, besides getting no honey crop. This year it was some better, for though they got no crop, the bees did get ample for winter stores, and so no feeding was necessary.

Every Bee-Keeper should have sufficient honey in each hive at the close of the season to support the bees for an entire year. Then if he gets the requisite 15 inches of rain, which insures a honey crop, this honey can be extracted in the early spring, when it will have lost none of its value. Then in case of a failure in 1896, the bees will be safe. Let no bee-keeper neglect this important precaution.—Prof. Cook, in Rural Californian.

Forty Foreign Conventions.—"Die Wander-Versammlungen der deutschen, oesterreichischen und ungarischen Bienenwirte," is the title of a pamphlet of 76 large pages, received by the courtesy of the author, W. Senst. It is a retrospect of the 40 conventions—wander-conventions they are called—of the German, Austrian and Hungarian bee-keepers, commencing with the year 1850. During some of

the years no convention was held, six different years passing without any, but since the year 1873 there has been no omission. In no place has a convention been held the second time, with the single exception that one was held in Vienna in 1853, and a second one in the same city in 1894. A fine portrait of the greatly revered Dzierzon faces the title-page.

To all bee-keeping readers of the German language, this is a work of great interest and value. To Americans it suggests that with all our boasted advancement we are much behind our German brethren in the way of organization. A membership of a very few hundred can hardly be reached on this side the water, while they number many thousands. We may as well follow their example, and spend our energies not so much in trying to get attendance as membership. Plan so that a man will be a member whether he attends or not, and then the attendance will be greater. A great deal has been unwisely said about the great distances in our country, but that has nothing in the world to do with the matter here any more than it has in Germany.

Mr. James A. Green, of Ottawa, Ill., was married yesterday (Nov. 6) to Miss Alice Olds, the daughter of a prominent organ manufacturer at Ottawa. Mr. Green is one of the experts who reply to the queries in the Question-Box department of the Bee Journal. Heartiest congratulations and long life to the happy pair!

What Have You Learned in the apiary the past season? Anything new? Or have you verified any former discoveries? If so, why not tell us all about them? Others have helped you by telling their experiences—why not you help them in return by describing yours?

A Sweet Locality is that in Utah, where, I learn, they have 100,000 pounds of extracted honey all ready to move to market. That amount of honey would sweeten quite a lot of pancakes. Alfalfa honey and good pancakes—num! num!

Among the Bee-Papers

Gleaned by Dr. Miller.

SEASON OF 1895 IN SOUTHERN CALIFORNIA.

Mr. S. F. McIntyre, of Ventura Co., Calif., secured in the Sespe Canyon over 35 tons of honey the past season. This is about 150 pounds per colony, and is a wonderful showing, when we consider the large size of his apiaries—hundreds of colonies in a place. He gave a very able essay at the Ventura county Institute on the California bee-keeping industry. He showed that the average for 20 years had been from 60 to 70 pounds per colony; though one season in three had been an entire failure. Except that people, through neglect, permit starvation in years of failure, the product would be still greater.—PROF. COOK, in Rural Californian.

CROSS-EYED BEES—FOUNDATION REJECTED BY BEES.

I have for many years enjoyed the reputation of being the boss idiot of Southern California. No man so far has questioned my title or contended for the championship. But the bees this year have stripped me of my honors, and I have yielded up to them the belt so long and honorably worn. This is how they went about to do it:

When the time came, in the spring, for putting on sections, I found I had more than enough, with foundation already in them, to cover my whole apiary. This foundation had been put in these sections more than a year before; and on our failure to get honey in 1894 the sections were stored away. I thought I was fortunate in being all ready for the honey crop, and piled on the sections liberally. Ten days afterward I looked over them to see how they were building. *Every* colony that had gone into the upper story was building *crooked*! Their favorite way of building was *crosswise* the sections, as if they wished to bind them together with iron bands. Crosswise, cat-a-cornered, around the corner and back again they came. But the foundation, they would not touch. It was pure wax, made in this apiary, and run out by myself. What could be the matter? I sat down on a hive to meditate.

"Here," said I, "is a whole apiary gone mad crosswise! I will get at the true secret of this state of affairs, even if it takes me all summer."

I got my microscope and examined the bees, and, lo! the secret was out. The whole apiary was *cross-eyed*. I stood aghast with astonishment and consternation. Could it be possible? Oh for a carload of "them fellers" from the East who know it all, to tell me how to breed back again to straight-eyed bees! I could see through the crooked part of it very plainly. When a bee got onto a piece of foundation to draw it out, being cross-eyed, she was actually not there at all, but around the corner, building a cross-section between the two sheets of foundation. Don't you see it plainly?

But to make assurance doubly sure, I tested my microscope by a first-class instrument, and found that it was *my glass* that was *cross-eyed* instead of the bees. So I had to seek a solution of this extraordinary freak in another direction. This foundation has been suspended in the sections for more than a year. Might it not, in that time—being in single sheets—lose some of its essential oils, and be unfit for the bees—too hard and flinty? I had more of this same foundation (in bulk) which I believed to be good. So I took the sections off the whole apiary, and replaced the foundation with that which was kept in bulk (but of the same lot) and the bees went at it and built as straight and beautiful combs as ever.

Now, to me this proves two things: 1. Foundation suspended in sections will not keep a long time without losing some of its "internal arrangements" which are necessay for the bees. 2. Foundation in bulk will keep a long time, retaining all its elements intact which are required for its successful working into comb. So you can notify that "carload of fellers" not to come all at once, but three or four abreast. —J. P. ISRAEL, in Gleanings.

My observations lead me to a little different conclusion. I've had bees work all right on foundation that had been in sections much longer than Mr. Israel mentions, but it was not left long on the hive. When left on the hive when there was no storing, I've had the bees glaze it over so they wouldn't touch it the next year.

SOME STRAY STRAWS FROM GLEANINGS.

About this time we begin to whistle up our courage by telling how bright the prospect is for next year.

The Hungarian government in 10 years has appropriated nearly $40,000 for the advancement of bee-culture. In seven years the products have doubled.

A drone, we have always been taught, takes 24 days to develop from the egg; but H. W. Brice says, in British Bee Journal, that, after much and careful observation, he is sure it requires 25 days.

The foul brood bacillus, under favorable circumstances, increases by division about once every half hour, so that in 10 hours a single bacillus increases to a million! If you doubt that, figure it up for yourself.

The standard frame of Germany is about a sixth smaller than the Langstroth. Lehzen, editor of the excellent Centralblatt, thinks there should be two standards—the larger for regions with spring and summer flow, and the smaller for regions with fall flow.

The bee-louse, Dr. Balint says, is not a parasite, as heretofore supposed, but a commensal or table companion, merely sharing with the bee the food taken by the latter.—Bienenpflege. [I believe this is right. I never have seen a case, and I've seen a good many, where the queen or bee showed evidence of harm from the so-called louse.—EDITOR.]

QUEENS LAYING IN TWO STORIES.

When running for extracted honey I have had no trouble in getting the queen to occupy the second story, because, when she was crowded for room in the lower set, I simply took therefrom two or more frames and put them above, filling the space now made below with empty combs or frames of foundation. With the brood above, the queen, after filling the combs put in below, would go above. I have had as many as 14 frames, more or less, filled with brood, and it was quite a common thing to have a dozen. When I had 14 such frames I generally added a third story; and in this as well as in the

combs of the second story not filled by the queen, I got extracted honey—much more in proportion than from colonies having two stories and the queen confined wholly to the lower hive by perforated metal. What was more, those three-story hummers—for such they were for honey—never swarmed.

In running for comb-honey the case is so different that I think I should try to confine the queen to the lower story; and whether, in the light of facts recently presented, I should want that brood-nest eight or ten, I can not say; though on account of the convenience of the eight-frame size I think I should prefer that size for both comb and extracted. For the latter it is large enough when tiered up; and in the case of the former it has, and probably will give forth its tons of honey as before.—Editorial in Gleaning.

Canadian Beedom.

Ripening Honey in the Hive.

Allen Pringle says honey should be allowed to ripen thoroughly (in the hive if practicable), and it should never be put on the market unripe, untidy, or unclean. Right you are; but will you please tell us, Mr. Pringle, under what circumstances it is impracticable to ripen it in the hive? It is more than doubtful if the necessary conditions for ripening honey properly can be obtained anywhere else but in the hive.

White and Alsike Clover.

We have learned to our sorrow the last two or three seasons that white clover may bloom without yielding nectar, but Alsike seldom if ever fails. Why is this? Perhaps because the roots of white clover do not penetrate far beneath the surface, while those of Alsike go down deeper. Hence in dry seasons the Alsike goes down to where there is moisture. Also, if the surface soil is poor, as it is apt to be, the Alsike pierces below what Mechi used to call "the agricultural pie-crust" and finds plant-food.

I am inclined to think poverty of soil is the great reason why the white clover does not yield so well as it used to do some years back. That part of the flower which secretes the nectar is the most delicate of the plant organs, and would naturally be the first to suffer from any weakness in the soil.

Strong Colonies.

More than 30 years ago I read in "Langstroth on the Honey-Bee" this advice in capital letters:—"KEEP ALL COLONIES STRONG." It embodies the quintessence of practical wisdom in regard to bee-keeping. A colony to be strong must have plenty of stores as well as a large population of bees. If the stores are scanty the queen will cease laying early in the fall, the consequences of which will be that the colony will be weak in bees when winter sets in. If it survives, which is doubtful, breeding will be delayed so late in the spring that when the honey harvest sets in there will not be working-force enough to gather it in during the brief period of its continuance. There will be an army of consumers by the time the harvest closes, but only a meagre supply of stores. Unless it is fed liberally, it will dwindle away and perish.

This will be the tragical history of a great many colonies the present winter. All colonies that were weak last spring are in a bad state now, unless they have been fed, and there are comparatively few bee-keepers who have gumption enough to take time by the forelock, and feed in the early fall—the only time when it can be done with ease and comfort.

All contrivances for feeding in winter are a vexation of spirit. The very disturbance of bees at the season of the year when they should be at repose is injurious to their welfare. But a colony fed up not later than September will increase and multiply till cold weather sets in, go into winter quarters strong in young bees, commence breeding early, secure all the honey that can be got in the fields, and give a good account of itself even if the season is a poor one.

To secure a strong colony it is not necessary to have a big hive. The eight-frame Langstroth is a good size for practical purposes. With honey enough to encourage late breeding in the fall, the queen will start laying early in the spring, the brood will occupy the space left vacant by the consumption of winter stores, and section-cases may be put on during fruit-bloom. By giving storage-room as soon as it can be to advantage, crowding is prevented, which I believe to be the chief cause of swarming. With plenty of room for both bees and honey, swarming may be greatly repressed if not prevented altogether.

A Tribute to the Memory of Father Langstroth.

The great convention at Toronto is now a thing of the past, but the remembrance of it will remain with me for a long time to come. Although we traveled over 300 miles to get there (at least some of us), we feel amply repaid for the time and the money expended.

The great pleasure of renewing old acquaintances, and forming new ones, cannot be forgotten in a day or two; to meet with and converse with such men as was the venerable Father Langstroth, is an honor; and then to be called upon to mourn the loss of so dear a friend as he, within the space of one short month, is sad indeed. But such is fate; the young may die, but the old must.

Father Langstroth's death will be mourned throughout the length and breadth of this continent, and, in fact, throughout beedom, not only where the English language is spoken, but where many other languages are used.

At our late convention, where many leading bee-keepers met, our venerable Father shone like a diamond in the gloom of night. The soft grip of his aged hand, the frank and manly countenance of him whom we learned to honor long before we had the rare opportunity of seeing him; his name is a household word throughout America amongst bee-keepers, and that name will be handed down from generation to generation. His kindly greeting of "God bless you," would be enough alone to make thoughtful Christianity think deeper, and say, "*Bury* all prejudice, and be brothers as we should be."

This world is in need of many more men of the Langstroth stamp than we have. Many a one has the "Rev." prefixed to his name, who is far from being as worthy of the title as the late Rev. L. L. Langstroth. And now let us all profit by the kind and good example set by him who is gone to reap the reward of his labors. W. J. BROWN.

Chard, Ont.

About Bees Eating in Winter Confinement.

On page 655, is an experience with bees, etc., by Mr. Cotton. The writer says: "When they return to the hive (meaning the bees) they again fill themselves, and never eat another drop after filling themselves until they again fly out, and have another spell of diarrhea."

Now, look here, Mr. Cotton, I will forward to your address, postpaid, one red apple, two pieces of chalk, and a pigtail, if you can make that idea work in actual practice as well as it looks in print. Just tell me how you train your bees to abstain from eating when they cannot fly out. If that can be done, I am sure it would be a saving of several dollars to me each winter, as well as to others, in this country, where a great many colonies are wintered on the summer stands.

I find, in looking over my diary of the winter of 1894-1895, that the bees were all prepared for winter on Nov. 2—all on the summer stands. November 15 they had a good flight; Dec. 15 another; Feb. 27, a partial flight; on March 21 another partial one; and on March 24 they had a good cleansing flight, and frequent flights from that time on. Now it will be seen that, according to Mr. Cotton's theory, the bees only filled themselves five times from Nov. 15 to March 24. And yet they consumed from 20 to 30 pounds of honey per colony! I was not aware that bees had such a tremendous stomach capacity during the months of confinement; but perhaps Mr. Cotton can tell us how the whole thing works.

To go back a little further than the winter just referred to, I might say that during the winter of 1892-93 my bees did not have a flight from Dec. 1 to March 15, and as nearly as I can remember the honey consumption was about the same as last winter, possibly not quite so large: and notwithstanding the long confinement, the bees wintered fairly well, but dwindled badly in early spring.

Now, I am satisfied that Mr. Cotton's theory will not hold good at Bethesda, but with his 50 years' experience he certainly ought to know what he is talking about. But is it not possible that he is just a little mistaken? If not, do please let us into the secret, and you shall have the apples and pigtail. D. W. HEISE.

Bethesda, Ont.

General Items.

Making Comb from Sugar Syrup.

That was a queer kind of question they got up for discussion at the Northern Illinois convention, viz.:

Will a colony of bees fed on sugar sprup, and no houey in the hive, and no way to get it, make comb?

It is very seldom, I think, in the history of any bee-keeper that he has a colony of bees under all of the above-named conditions. If he should have one so situated it would be an easy matter for him to determiue whether the bees would make comb or not.

I kuow that bees will make comb when fed on sugar syrup in spring for stimulative purposes. Last spring, and the spring previous, I fed several colonies in shallow wooden troughs placed in an empty super on top of the brood-frames. The frames were full of comb, and there was considerable honey in them, but while the feeding continuod the bees made comb in the troughs, and some on the underside of the cover above the troughs. I think if bees are fed on sugar syrup they will make comb at any season of the year when it is warm enough, if they have no room to store the syrup otherwise. The comb they made from sugar syrup was the whitest I ever saw. EDWIN BEVINS.

Leon, Iowa.

Dry Season and Light Crop.

The season here was so dry this year that the honey crop was very light. I got 25 pounds of comb honey and 75 pounds of extracted from 12 colonies, with only one swarm as increase. I use the 10-frame Langstroth chaff hive, and I would use no other, for I leave them out-doors in winter as well as in summer, without fear of freezing in cold weather.

I think that every bee-man ought to take the American Bee Journal, for I do not know what I could do without it.

J. D. HYDE.

Worden, Mich., Oct. 21, 1895.

A Report from Pennsylvania.

The honey-flow was very poor here this year, and of short duration. I was "not in it." I started in the spring with 12 colonies of Italian bees in the 8-frame dovetail hives. Some were very weak, and some were fairly strong colonies. Fruit-trees bloomed well, but the bees did not work on it very much. Then came a hard frost which froze everything, so that there was nothing for the bees to work on until clover began to appear. White clover was very plentiful, but the bees did not seem to care for it, and did not work on it very much. Red clover was abundant, and my bees worked on it more than I ever saw them do before. The red raspberry is as good for bees as anything we have; they work on it from early morning until dark, and for a period of about three weeks. Next came buckwheat, which was the best of all—lots of it, and it yielded abundantly. Bees be-

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gan to swarm when working on it. The last swarm that issued in this locality was on Aug. 21. There were more "buckwheat swarms" this season than all the May, June and July swarms put together. Although I had one colony that cast a swarm May 26, it swarmed again May 29, and again May 31, making three swarms in May from one colony—all good swarms.

By dividing and natural swarming I increased from 12 to 35 colonies, all in good condition. Some of the last swarms I had to feed, for the buckwheat was over before they had gathered enough to winter on.

I have the 3 and 5 banded bees, also one colony having a gray Carniolan queen. I have a few mismated Italian queens which I want to try by the side of the others, and run all for comb honey, if they and I live until next season; then I will report through the "Old Reliable" as to each race or kind. I could not see much difference this season between the 3 and 5 banded bees; both are very gentle, and are good workers. How the 5-banders winter as compared with the 3-banders, I have not yet tested. I winter all on the summer stands, in single-walled hives.

PAUL WHITEBREAD.

Hobbie, Pa., Oct. 21.

Results of the Past Season.

Last spring I had four colonies. One of them was very strong, and prepared for swarming in May, but the weather changed cold and stopped that. I then put on the supers with extracting-frames (I use the Langstroth 8-frame hive). The colony has not swarmed at all, but has given me about 150 pounds of extracted honey. The other three were not so strong, but made up well after a time. One of them swarmed the latter part of June—a good, large swarm, which has done well. Another one cast a large swarm in July. About 12 o'clock I hived them, then went to dinner. I came to look at them again about 1 o'clock, and they had all come out again, and were just going away. I followed them nearly half a mile, but lost them in a swamp. I have five colonies now, which have averaged nearly 100 pounds each of extracted honey.

Now, why did that swarm come out of the hive and go away? The hive was a good, clean 8-frame Langstroth.

Utica, Ont., Oct. 22. R. W. WALKER.

An Experience with Bees, Etc.

I had intended to write of a (to me) remarkable experience with bees. But I have not had time to attend to it until now.

On Oct. 2 I found a large cluster of 3-banded Italian bees hanging on the underside of hive No. 9, which had a pure 5-banded queen and colony. I thought they were a lot of bees from hive No. 8, that is only 14 inches from No. 9, and I pushed part of them off to see where they would go; to my surprise, I found they had a fertile queen—practically a prime swarm in October. As I have been in the habit of telling my friends "the queen in No. 9 lays as many eggs as a good hen" (she never all summer had three full frames of brood at any one time), I determined to pinch her

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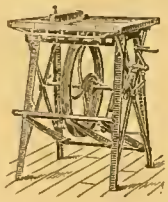

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head and put the new swarm in that hive. I did so, and although I smoked them both thoroughly, the goldens killed every one including the queen, of the new swarm.

While in Montrose recently I was taken out in a carriage to visit the farms. There are a number of bee-keepers there, and the honey-flow is always *very good*, they told me; but they also told me that it was almost impossible to make new swarms stay in the hive. They cluster all right, and go into the hive as usual, but in two or three days they leave and start northeast, directly towards the east end of the Graud Mesa, and about the deepest part of the Black Canyon of the Gunnison, which is 12 miles from Montrose. The bee-men think the bees find homes in the rocks, and say that thousands of swarms have gone there.

E. L. DUNHAM.

Greeley, Colo., Oct. 22.

Queens and Queen-Rearing.—If you want to know how to have queens fertilized in upper stories while the old queen is still laying below; how you may *safely introduce* any queen, at any time of the year when bees can fly; all about the different races of bees; all about shipping queens, queen-cages, candy for queen-cages, etc.; all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know—send for Doolittle's "Scientific Queen-Rearing"—a book of over 170 pages, which is as interesting as a story. Here are some good offers of this book:

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23C **Joseph Erway, Havana, N. Y.**

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Oct. 16.—We never had as good inquiry for honey as this fall, and never sold as much. We have not received as good prices owing to the amount of California stock unloaded on this market, which was sold at a very low price, both comb and extracted. We quote: No. 1 and fancy, 13@15c.; amber and dark, 8½@11c. Extracted, 5@7c. Beeswax, 28c. J. A. L.

BUFFAALO, N. Y., Oct. 14.—Honey is in good demand. We quote: Fancy, mostly 16c.; choice, 14@15c.; buckwheat sells slowly at 10@12c. Extracted very quiet. Will advance liberally upon all choice shipments of honey. Beeswax wanted at 28@30c. B. & Co.

CHICAGO, ILL., Oct. 14.—There is more activity in the comb market, with prices of 15c. for fancy; other grades in proportion. Extracted dull, ranging 4½@7c., according to quality. Beeswax, 27@30c. R. A. B. & Co.

CHICAGO, ILL., Oct. 19.—We quote: Faocy white comb, 1-lbs., 14c; No. 1 white, 13c.; amber, 12@12½c.; buckwheat, 10c. Extracted, as to quality and style of package, 5@6½c. Beeswax, 30c. S. T. F. & Co.

KANSAS CITY, Mo., Oct. 4.—The demand for comb is fair, with a fair supply; extracted in light demaud. We quote: No. 1 white, 1-lbs., 13@14c.; No. 2, 12@13c.; No. 1 amber, 11@12c; No. 2, 8@10c. Extracted, white, 6@6½c.; amber, 5@5½c.; dark, 4½c. Beeswax, 20@21c. C. C. O. & Co.

ALBANY, N. Y., Oct. 7.—Receipts of honey, as well as demand, have increased some, and the weather being cooler, I think this month and for part of next, as usual, will be the best time to market honey. We quote: White comb, 14@15c.; mixed, 12@13c.; dark, 10@12c. Extracted, white, 6½@7½c.; mixed, 6@6½c.; buckwheat, 5@5½c. H. R. W.

CINCINNATI, O., Oct. 23.—Supplies of all kinds are rather scarce yet, and arrivals find ready sales. Choice white comb honey sells at 14@16c., in a jobbing way. Extracted, 4@7c.

Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. M. & S.

NEW YORK, N. Y., Sept. 11.—New crop of comb honey is arriving and while the receipts from N. Y. State are light, we are receiving large quantities from California. Had two cars of choice comb and have several more to follow. On account of warm weather the demand is rather light as yet. We quote: Fancy white, 1-lbs., 15@16c.; fair white, 12@13c. No demaud as yet for buckwheat aud dark honey. Extracted is plentiful, especially California and Southern. We quote: California, 5@5½c.; white clover and basswood, 6@6½c.; Southern, 45@55c. a gallon.

Beeswax in fair demaud and firm at 28@29c. H. B. & S.

NEW YORK, N. Y., Sept. 23.—The market for comb and extracted honey is now open. Comb honey is not arriving as freely as expected, presumably on account of the prolonged heat, but it is selling very well, considering the hot weather we have had this time of the year. Of extracted honey there is quite a supply on the market; California and Southern with a fair demand. We are quoting comb honey to-day as follows: Fancy, 1-lbs., 15c.; 2-lbs., 14@15c.; white, 1-lbs., 13@14c.; 2-lbs., 12@13c.; fair, 1-lbs., 11@12c.; 2-lbs., 10@11c.; buckwheat, 1-lbs., 10@11c.; 2-lbs., 8@9c. Extracted, clover, 5@7c; buckwheat, 5@5½c.; Southern, 50@60c. per gallon.

Beeswax is in fair demaud, with supply limited; average stock, 27@28c.; fancy yellow, 29c. C. I. & B.

PHILADELPHIA, PA., Oct. 23.—Honey is selling freely, and good, choice comb sells on arrival. Pure Western extracted white clover sells very quickly and is in big demand. We quote: Faucy white clover, 16c.; choice, 14c., dark, 11c. Extracted, 5½@6½c.; pure white clover, 8@9c. Beeswax will not, in our judgment, advance much more, as it did last year, large quantities having been laid up at low prices. It sells fairly well at 26c. on arrival. W. A. S.

Binders for this size of the American Bee Journal we can furnish for 75 cents each, postpaid; or we will club it with the Bee Journal for a year—both for $1.60. We have a few of the old size (6x9) Binders left, that we will mail for only 40 cents each, to close them out.

List of Honey and Beeswax Dealers

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CHAS. ISRAEL & BROS., 486 Canal St.
FRANCIS H. LEGGETT & CO., 128 Franklin St.

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C. F. MUTH & SON, cor. Freeman & Central avs.

Convention Notices.

CALIFORNIA.—The California State Bee-Keepers' Association will hold its next annual meeting in the Chamber of Commerce in Los Angeles, on Monday and Tuesday, Nov. 18 and 19, the first session commencing at 2 p.m. on the 18th. This meeting will be largely devoted to the subject of marketing our honey. A large and representative gathering is desired, for plans are to be considered that will have a vital bearing upon our future honey markets. JOHN H. MARTIN, Sec.
Bloomington, Calif.

ILLINOIS.—The Illinois State Bee-Keepers' Association will hold its annual meeting at the State House in Springfield, Nov. 19 and 20, 1895. The I. O. O. F. have their grand encampment, beginning on Nov. 19, and they have secured an open rate of a fare and a third for the round trip, from all points in the State. So we hope for a large attendance and a good meeting.

The Special Meeting of the Illinois State Bee-Keepers' Association will be held in Chicago, at the New Briggs House, northeast corner of Randolph St. and Fifth Ave., on Thursday and Friday, Jan. 9 and 10, 1896—the week of the National Cycle Show—when excursion rates will be given. Notice will be published later as to whether these rates will be on the certificate plan or otherwise. Chicago hotel rates are 75 cents each, per night, two in a room; $1.00 if one in a room. Meals extra—pay for what you order, or go elsewhere for meals, if preferred. JAS. A. STONE, Sec.
Bradfordton, Ill.

NOTICE.

REINERSVILLE, OHIO, Nov. 1, 1895.

I beg to announce to the bee-keepers in general, that I have made arrangements with The A. I. Root Co., Medina, Ohio, to manufacture "THE GOLDEN COMBINED HIVE-COVER AND FEEDER," as illustrated and described in the American Bee Journal, page 213, April 4, 1895, excepting the feed receptacle is made perpendicular instead of beveled; also leaving out the feed dish, from the fact that almost all bee-keepers have the Simplicity Feed Trays, which can be placed in the feed receptacle, or a number of them, or any suitable dish one may have, thus simplifying the cost to a price that all bee-keepers can purchase them. [For price, see advertisement on page 721.]

In ordering feeders, send direct to The A. I. Root Co., Medina, Ohio.

Thanking the many for their cheering words in behalf of this Feeder, I kindly bespeak a trial patronage of the Feeder and Hive-Cover, by every bee-keeper in the land.

Respectfully, J. A. GOLDEN.

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For **each New** Subscriber to the American Bee Journal sent us by a present subscriber, we will give as a Premium **40 cents' worth** of the Books, Pamphlets, etc., described on this page—figuring on the **retail price** given in connection with each book, etc., below. This is a very easy way to get a lot of most excellent literature.

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Yes, in addition to the above offer, we will mail free a copy of Newman's 160-page "Bees and Honey"—premium edition—to each new subscriber. On **new** subscriptions, the $1.00 will pay for the Bee Journal from the time it is received **to the end of 1896.** NOW IS JUST THE TIME to work for big lists of New Subscribers.

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Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains 250 pages, and 245 illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, $1.00.

Langstroth on the Honey-Bee, revised by Dadant—This classic in bee-culture, has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages; bound in cloth. Price, $1.40.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages; bound in cloth and fully illustrated. Price,

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of Queen-Bees are reared in perfect accord with Nature's way. 176 pages, bound in cloth, and illustrated. Price, $1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopaedia of 400 pages, describing everything pertaining to the care of the honey-bees. It contains 300 engravings. It was written especially for beginners Bound in cloth. Price, $1.25.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is too well known to need further description of his book. He is a practical and entertaining writer. You should read his book. 90 pages, bound in paper, and illustrated. Price, 50 cts.

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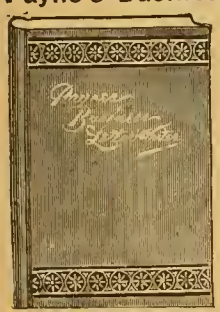

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Prof. A. J. Cook—I think not, if properly done.

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J. A. Green—No, if it has been properly liquified.

Dr. J. P. H. Brown—No, not if properly managed.

Mrs. L. Harrison—No, not if melted at a low temperature.

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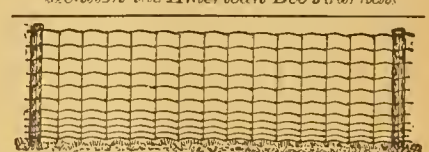

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35th Year. CHICAGO, ILL., NOV. 14, 1895. No. 46.

Contributed Articles.

On Important Apiarian Subjects.

Reminiscences of Rev. L. L. Langstroth.

BY REV. W. F. M'CAULEY.

(Continued from page 710.)

Mr. Langstroth was a graduate of Yale College, and at the time of his death only eight or ten older alumni were living. He was also a patriarch in the Dayton Presbytery, of which he was a member many years. His home at Oxford, as well as that in Dayton, was within the bounds of the Presbytery named. He was second on the roll, which was prepared according to the dates of the ordination of the members. He never attended but one or two meetings of the Presbytery, to my knowledge, in the last eight years of his life, on account of bodily infirmity or distance; but I remember that on one occasion when he did attend, he came to the front at a point in the session, in a manner both striking and pleasant. I have been the bearer of his regrets to the Presbytery for his inability to be present.

Evidently he never lost interest in the church of his choice, or in the affairs of the denomination at large. When a church difficulty was under consideration in a committee room, he expressed a desire to meet with those who were discussing the matter, saying that he knew of an incident, the relation of which had settled two church quarrels, and he thought it might be effective in the case in hand. The incident was simple enough, but contained a wealth of philosophical suggestion: A farmer's sons had gone West to look up a home, and having found a desirable location, wrote back, extolling the merits of the place, but added: "And 'sassafig' grows here, too!" Said the father, indignantly, on receiving the epistle, "I have been all my life contending with 'sassafig,' and I am not going West to fight any more 'sassafig!'" Mr. Langstroth said that we could not get away from "sassafig;" that "'sassafig' grows here, too;" and that we might as well make up our minds not to expect perfection in any congregation, but go on in a brotherly way with patient forbearance. I am inclined to think that for some reason he did not have the oportunity to relate the incident to the contending parties, and that the difficulty did not end but in the organization of another church, thus creating a new agency for the conflict with "sassafig."

When his physical condition permitted, he was a frequent visitor at the 4 o'clock Y. M. C. A. meetings, on Sabbath, where he often spoke, with an earnestness and practicality that were most impressive. One of the concluding acts of his life, after the final cloud of melancholia had dissolved into the rejoicing sunlight, was to attend the Dayton Y. M. C. A. and speak in the gospel service. His enunciation in public address, as in private conversation, was always distinct, and his manner left the impression of a wide personal experience behind his words.

He occasionally preached, while a resident of Dayton, and was always ready to assist in a communion service, where his glow of feeling warmed all hearts. He once preached for me on Romans 15:13. The text may be taken as illustrating the general cast of his daily thought. On the occasion named, the large pulpit Bible, through an inadvertence, fell to the floor; but though embarrassed by the accident, he preserved his composure, and preached throughout in a connected and helpful manner. This incident shows how faithful he was to every opportunity to do good, even when his service had to be performed under the disadvantages of old age.

Once he apologized for not always being present at the morning service, saying that he thought he could do more for the pastor by going about to other churches and speaking favorably of his minister when there was a proper opportunity to do so. It would seem that he always had some plan in his mind whereby he could help a brother in his work, or assist a cause, or promote a general good. He felt that perhaps he still had a mission for his closing years.

In company with another he made a call on a wealthy benefactress of her race in Dayton, in behalf of Western Female Seminary at Oxford, and doubtless his appeal had much to do with securing from her the donation of $5,000.

He possessed, to a considerable degree, poetic power. Two hymns from his pen I give here, and I do not know if any more may be found among his literary remains. Some years ago, he brought me a hymn, which he subsequently revised to some extent, saying that Karl Merz, formerly professor of music in the university town of Oxford, had written music for it, but that the manuscript had been lost. The hymn, set to a new tune, as a result of the interview, and afterward published, is as follows:

LONGINGS FOR CHRIST AND HOME.

BY REV. L. L. LANGSTROTH.

Thou precious, loving Lamb of God;
For our sins slain on Calvary,
It is thy will, 'twas sealed by blood,
That where thou art there we shall be.

Oh, who would then live always here?
Is earth a satisfying place?
Dear Jesus, we shall praise thee where
We see thy glory face to face.

Meek suff'rer on that shameful tree—
Herein is love! herein is love!
Thy chastened children thirst for thee,
And pant for living streams above.

Strangers and pilgrims here we roam
Till gathered, Savior, to thy breast,
And sheltered there with thee at home—
Oh, happy home! oh, holy rest!

The other hymn, for which special music was also written, was sung by a choir at a Y. M. C. A. meeting, but, so far as I know, has not heretofore been published. It seems to have had no title, and the one given here is my own selection.

LOVE'S ANSWER.

BY REV. L. L. LANGSTROTH.

Precious Savior! Holy Name!
Knowing well this poor, weak frame,
Burdened sore with sin and shame,
Canst thou love me still the same?

Yes! dear child; for love I came,
On my cross bore all thy blame:
Forward! conquer in my name!
Know I love thee still the same!

In May, 1895, I changed my residence to Toledo, and for some months did not come into contact with Mr. Langstroth, but in September he and Mrs. Cowan, his daughter, spent a night and part of the preceding day with us, when on their

way to the bee-keepers' convention in Toronto. This visit was most delightful. Mr. Langstroth was in a happy mood, and enjoyed himself fully. In the afternoon, we went to Walbridge Park, on the banks of the river above the city, from which there is an extensive and beautiful view. He was in harmony with all his surroundings. There we talked over matters of mutual interest, and opened up each other's experiences, purposes, and feelings. He spoke afterward of how much better he had come to know "Brother McCauley" through this visit.

He related to me an incident of his tutorship in Yale, and told how he had given personal attention, out of hours, to students in special need of instruction. On one occasion on account of previous illness, he missed the hour for his class. It was a custom in Yale for the students to dismiss themselves when the teacher was late, but one of the members of the class said: "Is this the way to treat Tutor Langstroth, who has been so kind to us?" and they appointed one of their number to inform the teacher that it was time for the recitation. He was found still in his room, but the class waited patiently for him.

A second time he was late, and a second time the class waited, and then Mr. Langstroth informed his scholars that if he was late again they might dismiss themselves without ceremony.

On the journey to and from the Park, Mr. Langstroth showed considerable physical vigor, needing no assistance in stepping on and off the cars, saying, "Only give me time." He spoke with great satisfaction of the fact that his memory had brought back to him things at one time forgotten. He quoted favorite passages, and even Homer in the original. I have now a little pocket present which at that time he said he would request to be sent me. The matter, though small, did not escape his attention, but the article came promptly, after the Toronto convention. He spoke of his recurrent physical infirmity, and said that he thought Shakespeare had written Hamlet out of his own experience, or that of some friend—he had so exactly described the conditions of the case. He quoted from Hamlet where he says that he had lost all his mirth, "foregone all custom of exercises," that the earth was like a "sterile promontory," and the air and the "majestical roof fretted with golden fire," like a "pestilent congregation of vapors."

Mr. Langstroth told how a certain scene in New England had seemed all loveliness when he drove through it one day, free from physical depression, and how it possessed not the slightest interest for him on another occasion, when in a state of melancholy.

The next morning after this conversation, we parted at the Union station in Toledo, not to meet again on earth. Monday forenoon, Oct. 7, I received word from Dayton that Mr. Langstroth was no more, "for God took him." On the previous Sabbath he had gone to the church, to attend the communion service and to assist the pastor in its administration. All the members of Mrs. Cowan's family were at home and attended the service, but one. Among the number was her grandchild, the infant daughter of Lorraine Cowan, of Indianapolis. "Take her," said Mr. Langstroth, "and then, in after years, she can say that the first time she ever went to church she heard her great-grandfather preach."

At the church, the pulpit was put aside on the rostrum, and a chair placed for Mr. Langstroth, who said that he "did not feel as well as usual." He sat down and said, in substance, "I want to talk to you of the love of God, and how we ought—" then paused and wavered. The pastor, Rev. Raber, noticed the circumstance, and came to his assistance, and in a moment Aurelius Cowan was at his grandfather's side. Most of the audience remained in their seats, and no one cried out. There were two physicians present, but there was no opportunity for medical skill.

Thus amid silence and awe the spirit of our friend and brother went swiftly away "in the beauty of holiness." I have thought, again and again, how significant and beautiful was that death. For him was fulfilled the promise, "At evening time it shall be light." After a variety of experiences, and a full share of peculiar affliction, he was enabled to round up his career with satisfaction and triumph. A time of "clear shining after rain" was given him to journey to the bee-keepers' convention of North America, and thus bear, at the very close of life, his well-earned honors, thick upon him. Deprived of the work of the pastorate through so many years, he was permitted to die in the very performance of the ministerial office, and in the administration of the Lord's supper.

We gather from his closing years the benefits of his ripened character; and as we pause awhile in the after-glow of his life, we read the lesson of trust in God, who disposes events to his own glory and the final good of his children.

In closing these reminiscences, I can no better express my feelings than by quoting two stanzas, written and set to the tune by Karl Merz, which was found by and by, and published with a dedication to Bro. Langstroth:

Sweet peace of God the aged know
Who walk for him this weary way:
With joy they leave the scenes below,
And mount on wings to youth's fair day;
Earth's highest wisdom they repeat,
Then on the endless ages roll:
Here, sweetest hours at Jesus' feet;
There, sweeps the pathway of the soul.

Toledo, Ohio.

What Dr. Miller Thinks.

That Canadian Law.—Has one of the Bee Journal typos been juggling with that Canadian law on page 694? or what does it mean, anyhow? "4. Any unpursued swarm which lodges on any property whatsoever without settling thereon, may be secured by the first comer unless the proprietor of the land objects." How can they "lodge" without "settling?" and how can they be "secured" "without settling?"

Sweet Clover.—I am quite interested to know more about the failure of sweet clover mentioned on page 696. Will Mr. Lovesy please tell us whether he knows any reason why it failed? Were the bees working on nothing else at the time? I've been used to thinking of sweet clover as one of the things that always yielded honey, although I don't know any reason why it should not fail as well as white clover.

Size and Shape of Bees.—J. H. Andre mentions something quite new to me, on page 697, that is, deciding that a number of bees all belong to the same colony because they are of the same size and shape. I never tried it, but I have no idea that I could make sure that any two bees taken from my hives belonged to the same colony merely by their size and shape. Just think what a variety there must be in an apiary of a hundred colonies, if no two colonies have bees of the same size and shape.

Another thing he mentions will probably be new to most bee-keepers, and that is that when two colonies of different localities are working on small pieces of comb, one of them will generally retire and leave the other in possession of the sweets.

Taking Honey to Market.—On page 700 the editor favors the plan of taking a carload of honey to market and going with it. Sometimes that might be the best way, but I don't know that it would always be so. If one could be sure of striking a bare market there would be no trouble. But if all were to act on the plan, there would likely be a good many carloads moving at about the same time, and there being no concert of action, they might nearly all strike the same market. The buyers would not be slow to take advantage of the situation. The honey is there—must be disposed of in some way, and buyers can have things their own way. Very likely the editor may ask what is a better way. I don't know. That's a question every fool can't answer.

Numbering Hives.—That's a good way to number hives, given by R. V. Sauer, on page 702. I think, however, I can suggest an improvement, and that is to have a number on each hive, and have the numbers so large that they can be seen from any part of the apiary. In that case I think the average length of time to get where the number will be seen will be less than the time taken to count along the alphabet and then down the row. And I feel sure I should be less likely to make mistakes. I heartily endorse what he says about the pleasure of sitting down in the house to look over the day's work and map out the next.

Stopping Robbing.—The plan given on page 707 for stopping robbing—breaking the combs of the robbers—is a very old one, but I think it has not proved reliable.

Crimson Clover.—E. B. Thomas says on page 702: "It is useless to sow it in the spring, as it will not thrive." I think all writers agree in that. And yet a small patch that I had sown last spring with oats came up and blossomed, and now, after hard freezing weather, looks quite green. I expected it to die down after blooming, but it kept on as green

as ever. But it will probably succumb to the winter, whereas if it had not blossomed it would stand a chance of living through. Possibly if I should see how it grows when sown in the fall, I would say that mine did not "thrive."

Marengo, Ill.

Co-Operation Among Bee-Keepers.

BY PROF. A. J. COOK.

There is much discussion among bee-keepers as to the desirability of some kind of co-operation—the inauguration of something like the Citrus-Fruit Exchange—some move that will insure a living price for the honey produced. At the last meeting of the State Bee-Keepers' Association no subject received so much attention or elicited more earnest discussion than this. Since that time, I, as president of the Association, have received many letters regarding this subject from nearly every honey-producing section of Southern California. The people are alive to the importance—the absolute necessity of some such action; indeed, upon motion at the last meeting of the State Association, nearly every one present pledged himself to co-operate in such a movement in case it was inaugurated. The Los Angeles County Association have called a meeting to consider this one subject.

That there is this unrest and desire for some improvement will be easily explained, if we look for a moment at facts. It is acknowledged everywhere, that California honey is equal to the very best produced in any country. Therefore there is no reason in the quality of the honey why our product should sell for one farthing less than the best produced in the East, Europe, or even Mt. Hymettus of Greece. Yet it is a fact that while the Eastern producer secures readily from six to eight cents for extracted honey, an every way equal article often sells for four or even three cents per pound in the honey-producing region of California.

One of our largest honey-producers stated at the meeting referred to, with an unction well earned by success, that he, by building a storage house, so he could keep his honey if the markets were not satisfactory, had secured six cents for all his honey and would sell for no less. It is unnecessary to say that he was regarded with envy by all present. Yet even this seems no large price, when we consider that the price East is two cents more for the same quality of honey, and that the freight rate is only one cent. per pound, or only 20 per cent. of the selling price of the honey. It goes without saying that every pound of first-class honey—and we have little else, produced in California—ought to bring the producer at least seven cents per pound, and might, if the proper machinery was put in motion to bring it cheaply and quickly into the markets of the East.

There are real obstacles in the way of securing efficient co-operation: First, the producers are often poor and must have immediate returns. Indeed, they often secure money on a prospective crop. Of course such accommodation is difficult, if not absolutely impossible, in any scheme of co-operation. In fact, to realize on anticipation almost always requires large discount, and, in part, explains the low price secured by California bee-keepers for their honey, and what is more to be regretted, often determines the price for all honey. It is difficult to see how any system of co-operation could meet such wants.

Again, it is almost impossible to secure the union of all bee-keepers in any system which may be adopted. Some of the most intelligent and forehanded of our bee-keepers, like the one already referred to, feel satisfied with their sales—so much in advance of the usual market—and see no need of union for themselves, though they acknowledge that it would be of great service to most of the craft. Others are poor and feel that they cannot wait for the slow processes of co-operation, and others, still, are ignorant, and maybe, suspicious, which is the usual companion of ignorance, and so are afraid to trust any exchange or union that takes their property before a cash return is made. Yet, any scheme of co-operation which is limited to the honey product, must of necessity be general if it is to be of very much account.

With so many and such decided difficulties before the California bee-keepers, it is a question of no easy solution just how a successful method of co-operation can be brought into general practice.

It has been hoped by some that some other organization like the Citrus Fruit Exchange might also arrange to dispose of the honey. It is claimed that this would save duplication of much of the necessary machinery, such as room for storage, agents in the Eastern field to find a market, etc. It is very probable that if the officers would take the same interest and exercise the same care in the marketing of the honey that they exercise in the sale of oranges, that this would be the wisest plan, if the apiarists could unite in trusting their product to them.

The second plan is for the bee-keepers to co-operate and form a honey exchange, like that now organized by the Citrus Fruit growers. To make this a success the bee-keepers generally must give to it earnest support. As we have seen, lack of confidence on the part of some, and need to anticipate actual sales by others, are likely to interfere with the general co-operation that is absolutely necessary to any considerable success.

A third plan promises the least friction and greatest assurance of success, which if successful, will soon lead to the adoption of the plan last mentioned, as it will prove to the doubtful that co-operation is feasible and has practicable merit. This plan is suggested by the experience of some bee-keepers, notably H. E. Wilder, of Riverside, who, two years ago, took his large honey crop East and disposed of it at a good figure. The plan is to send some man like Mr. Wilder, in whom the bee-keepers have confidence, East with a carload of honey, to be followed by other carloads as he gives orders. If desired, this person could give bonds equal to one or two carloads of honey, and he would remit as rapidly as sales were made. Only those who had confidence in this scheme need join the enterprise, and if the success which is hoped attends the scheme, others would join another year, and as nothing succeeds like success, we might well hope and expect that this plan would soon ripen into a honey exchange which would sweep into its embrace all, or substantially all, the apiarists of Southern California. It seems that this plan has much to recommend it, and no insuperable difficulty in the way of its accomplishment. It is to be hoped that this plan may be tried this season. There is no better place for it to materialize than in San Bernardino, Riverside and Los Angeles counties, as in no sections of the world are there more enterprising intelligent apiarists. In the hands of honest, pushing, wide-awake men, such a scheme may do much to bring immediate benefit, and be more fruitful of good in opening the door to the grand scheme of co-operation that shall reach, with blessing, to all the honey producers of Southern California.—September Rural Californian.

Claremont, Calif.

Sweet Clover for Honey and Forage in Nebraska

BY WM. STOLLEY.

Frequent requests made in the columns of the American Bee Journal, asking for more information about sweet or melilot clover, are the incentives causing me to report my experience with this most excellent honey and forage plant. For about 10 years I have grown it, partly for pasturage and forage for cattle, but also for the purpose of providing for my bees the required bee-pasturage.

For years I have had from 4 to 10 acres growing with melilot, and the public roads within about two miles of my apiary are more or less occupied by it now. The result is a remarkable one, considering that my location naturally is a very poor one respecting honey-production. From natural bloom we have no surplus, except from the middle of August until about the middle of September, and this surplus is dark in color and rank in taste. What are the conditions now? Let us see:

I began with 17 colonies last spring. On April 3 I found 12 colonies in first-class condition, 4 colonies were but medium, and one colony was quite weak. October 15 my carefully kept record showed this:

Best colony, 237 pounds of surplus extracted honey; weakest colony, 97. Total amount of extracted honey secured, 2,980 pounds. Increase, 13 colonies.

I had 8 natural swarms, of which 2 absconded. My average per colony is 175⅛ pounds of honey. In light colored honey I got about 2,000 pounds, and my fall honey is by no means dark, for the reason that a large percentage of it is sweet clover honey.

I have also, to a great extent, requeened my apiary, so that I have now 22 choice tested queen of 1895, and but 8 fine queens of 1894.

All my colonies were finished packed inside the hives on Oct. 15, with plenty of natural stores (mostly white honey), and will winter as usual on the summer stands, in a bee-shed open to northeast, east and southeast. Now to return to sweet clover.

I will say further, that the hostility of some farmers against sweet clover is abating. It has taken them years to learn that sweet clover is one of our most valuable forage and pasturage plants, but they are forced to "acknowledge the

corn" at last. For years we have had a protracted drouth in this part of the world. Early last spring there actually was nothing to feed to horses and cows, with many a poor man in the city, and a great many farmers found themselves in the same fix. Not a spear of green grass would appear after sweet clover and alfalfa was up 12 to 18 inches high. Such a condition of things was apt to prove the merits and demerits of the plant in question.

Well, to be short about it, I will say that the poor people with their one milch cow, went onto our country roads and got all the nice, green clover they wanted. Not only their cows, but also horses and hogs soon learned to relish the herb, and it proved to be a veritable blessing to a multitude of people.

We have an old saying, that a farmer will not eat unless he knows what it is. Yes, many of them will refuse the choicest of oysters. So with melilot clover—I consider it the "oyster" among the forage plants—after a taste for it has been acquired by stock. For bee-keepers it is just "the thing"—at least in this section of our country.

Melilot requires considerable curing when cut for hay, and salt should be used freely when it is stacked, but the hay is relished by cattle in particular.

Alfalfa, although excellent in its place, cannot compare with sweet clover here as a honey-producer, since it is always cut just about the time it begins to yield honey in profusion.

Further information about melilot will be given with pleasure, if desired. Grand Island, Neb., Nov. 1.

[Yes, let us have all the information possible about sweet clove, and about any and every other plant that is valuable for its honey and for forage. We can't learn too much in this line.—EDITOR.]

Marketing Honey—Suggestion for the Union.

BY W. D. FRENCH.

I wish to call the attention of our bee-keeping friends to the ways and methods by which apiarists of California are subjected in the marketing of their crops.

It is a fact observable in every city and hamlet of this State, that there exists a combination, composed of those who buy honey, who establish the price thereon, regardless of what it is worth in New York, Chicago, or other Eastern cities, and compel those who must have ready cash, to accept one-half of its actual worth, and thus rob them of their money in daylight to satisfy their avaricious greed.

They will have the audacity to tell you that honey has declined one-half, or so many cents, when they see or hear of a nice lot of honey being sent in and they know it will be sold on their market.

A postal card written to me recently from a commission house of San Diego, which was in reply to a letter addressed to them, reads thus:

"We offer two carloads L. A. honey at 3.90. Profit on two cars 5 cents. Chance for spec.
"This explains the honey situation to-day.
"(Signed.) N. & Co."

They presumably took me for a chump in quoting prices and informing me as to the situation of the honey market. This proposition works well in some cases, as a large number of the bee-keepers are really not informed on the price of their product.

Now, how are we to solve this problem by securing to the producing class an adequate amount for their product? It has occurred to me that the National Bee-Keepers' Union could step in and show its hand. To illustrate:

Suppose that in each locality a number of the Union members were stationed to receive all honey at a price established by said Union, and paid for when sold, except in cases where people must have ready cash, and where it became necessary in such cases the same to be paid from the funds of the Union.

It would be needless to say, if such a proceeding were in force, every bee-keeper in California would become a member, and thus greatly enlarge its funds and membership. The Union could establish a bureau, buy, ship, and sell, at a slight profit—enough to cover all expenses—and thus do away with all this sort of daylight robbery which prevails in this State.

I have only outlined the method which seems quite rational to me, and I hope others may share in a discussion upon this subject. I would particularly ask the attention of Mr. Thomas G. Newman, who, I trust, will speak as to the feasibility of this proposition. Foster, Calif.

The Swarming Habit—Breeding it Out.

BY BERT LOWNES.

(Continued from page 712.)

But why is it impossible to breed the swarming habit out of the bees?

1st. Because it is contrary to the laws of Nature.

2nd. Because of the fact that even though other things were equal, it would necessitate the co-operation of *all* the bee-keepers in a common effort to breed out the habit; and since the majority are opposed to it, that of itself would be impossible.

It is not an easy matter to breed pure Italians, and it would be next to an impossibility to breed Italians, or any other race exclusively—I mean for every bee-keeper on the face of the globe to breed Italians only, owing to the liability of the queens meeting drones of a different race, from the woods.

In the case of Italians, the queens can be tested in a comparatively short time, and, if not pure, replaced. It would not be so easy to test the non-swarming bees. The test, of course, would be the refusal of the bees to swarm.

Suppose we had a young queen that we wished to test. As it is the exception for a colony containing a young queen to cast a swarm the first season, there would be no chance whatever of judging of her purity until the next year, and owing to possible drouth, or some other drawback, our chances then would not be great, for even if the season were as good as the best, we could not be *certain* of her purity, even though her bees did not swarm for two or three years. By that time her usefulness would be about over; before that time, however, some of her drones would in all probability have met with some of the other queens, and in case she was not pure, the chances would be that the apiary would contain as many, or more of the swarming bees than the non-swarmers. These facts add, also, to the undesirability of breeding out the habit.

One might go to some isolated spot (another undesirable feature), where there are no bees whatever (?) within a hundred miles (and like enough no honey-plants, either), and be happy (?) because of the assurance that there would be no trouble caused by the interference of a neighbor's drones. *Suppose* he could? Would the in-breeding that is sure to follow such a procedure, be desirable?

"O that's easily remedied. We'd just have a few other bee-keepers remove to other isolated places, and we would exchange queens, and thereby be enabled to introduce new blood into our stock, and not be obliged to in-breed." But *suppose* it were possible to do such a thing, wouldn't it be a rather risky business, to introduce other queens into your apiary, for fear of their having *accidentally* met with a drone that still had the *swarming* blood in him?

"Yes, but *we'd* buy *tested* queens, though."

O! would you? We will *suppose* you would. If an Italian queen that can be tested in about three weeks' time can be purchased for $1.00, what would be the price of a tested non-swarmer, that it would take three years to test? Would the price, or her age, render her undesirable? If a person were working to *prevent* swarming, he could, if he desired, introduce new blood each year, but in breeding *out* the swarming habit, this would not be permissible, for with each new queen introduced that colony is placed at the point from where you started to breed out the habit.

Are there any other reasons for believing that breeding out the swarming habit would be undesirable? Yes.

1st. As mentioned before, there could be no improvement in the bees by changing their natures contrary to the *laws* of Nature?

2nd. It would be impossible to make such a *great* change in the one hive, and leave the bees unchanged in other ways; and the chances are as ten to one, that the other changes wrought by the one great change would be undesirable ones.

3rd. The fact that the bees of queens which are not very prolific are not so much given to swarming as those of others, some would be led to select such queens in their efforts to breed out the habit?

4th. It would be undesirable to all those to whom "increase by dividing is undesirable."

Suppose A. had 100 colonies of bees of the non-swarming kind, and during the winter he should be so unfortunate as to lose 20 colonies. As his locality can support 100 colonies nicely, he would naturally wish to bring his apiary up to its former number, even though he should not wish to have 20 hives lying idly about. Being non-swarmers, of course he cannot allow a sufficient number to swarm to make up the loss, and although he is not exceptionally fond of "dividing,"

he is obliged to accept, and make the most of it, it being his only alternative.

If dividing is undesirable with "swarming" bees, it would be doubly so with non-swarmers. With the former, one can wait till his bees are near the swarming point, before proceeding, and probably be able to give one division a queen-cell while the other retains the queen. On the other hand, there would be no queen-cell for the non-swarmers, and the chances are that they, not having any desire to swarm, would not have *nearly* the amount of bees, brood, etc. Although one division may retain the queen, the other is obliged to rear one from the egg or larva, in either case not having a laying queen, it is safe to say in less than three weeks, and no hatching bees for three weeks more. This undesirable feature *might* be partially overcome by those who rear queens for sale, but that would not help others; besides, I think there would be some difficulty in having bees that know nothing of swarming, rear queens, and although this *might* lead some to a process of rearing queens from the egg artificially, that would not be desirable any more than that it would afford us the pleasure of knowing that it *could* be done.

5th. It would not be desirable for the simple reason that the majority do not *desire* it. Each year there are new hands at the business, whose greatest desire is to *have* their bees swarm.

Aside from the impossibility and undesirablity of breeding out the swarming habit, it is *unnecessary* to do so. Since *prevention* of swarms is all that a person expects to accomplish by breeding out the habit, a practical *plan* of prevention is all that is necessary, and I think would be more desirable, because—

1st. It can be more easily accomplished.

2nd. It is necessary to prevent swarming before the habit can be bred out.

3rd. A person could introduce new blood as often as desirable without regard to pedigree and mating, any more than that the queen is an Italian, Carniolan, etc., properly mated.

4th. If he should lose a number of colonies during the winter, or if he should wish to increase his stock, he could allow a sufficient number of colonies to swarm to meet the demands.

As to the possibility of having a perfect plan of prevention, I have not the space to say anything further than that since it is a fact that a large hive will check swarming to a certain extent, and a hive well ventilated has the same tendency, and since a colony in which there is a young queen (less than a year old) *rarely* casts a swarm, I think that a judicial combination, so to speak, of these facts will, in practice, bring us as near perfection on the line of prevention as it is possible to come; and I might add, be as near to breeding out the swarming habit as it is possible to be.

Dr. Miller, perhaps, might *think* that because some people *think* it is possible to breed out the swarming habit, while others think it is impossible, that the question is to be forever unsettled; others however may *think* otherwise. As for me I don't think that what a man thinks has so much to do in deciding a question, as do his reasons for thinking as he thinks. I wonder if other people think as I think. If he, or any other, thinks that it *is* possible to breed out the swarming habit, and thinks he can prove it beyond a doubt, I think there would be quite a number willing to listen while he explains.

I will add that the most convincing proof would be, to produce a colony of bees that, notwithstanding all threats, entreaties, etc., would emphatically refuse to swarm. Then if the bees were no worse otherwise, it would also prove the desirability, except perhaps in the line of increasing, and keeping the breed pure, etc.

I know it is hard to tell what changes will take place, and in these days when electricity is doing so much in the line of improvements, it is not best to attempt it; still, I will venture to state, however, that the swarming habit will not be bred out of the bees in time to be of any benefit to Dr. Miller, or prove in any way disastrous to me. So as far as we are concerned, I think we may as well quit arguing.

Charter Oak, Iowa.

P. S.—Perhaps it will be noticed that in pointing out the impossibility of breeding out the swarming habit, I dwelt more on the impossibility of keeping a non-swarming race of bees pure, than on the impossibility of producing a non-swarming race; but I do not wish to be understood that way. I do not believe that it is possible to breed out the habit, because contrary to Nature; but even if it were possible, as far as Nature is concerned, there are other circumstances existing now that would render it impossible. B. L.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Fumigating Brood-Combs.

Does it injure brood-combs to fumigate them with sulphur? That is, will they be distasteful to the bees another year? W. C.

ANSWER.—I've smoked them till all was blue, and the bees used them afterward all right.

Bees Packed for Wintering in a Building.

1. Would you advise wintering bees in a building well ventilated but not frost-proof, if the building were kept dark, and the bees packed with chaff cushions, as for out-door wintering?

2. Would it be desirable to leave the Miller feeder properly packed in place through the winter? R. R.

Menomonee Fall, Wis.

ANSWERS.—1. I wouldn't advise bees being fastened in any place where they have no chance to fly out, unless such place is kept at a temperature of at least 40°, and generally a higher temperature. If there is communication with the outside air, so that the bees can fly whenever the weather is warm enough, then they might do all right.

2. I think it would do no harm, and might do good. I hardly suppose you can pile too much on top of a hive, and I doubt if enough is thought of the importance of keeping the *top* of a hive warm.

Wide-Frames and T Supers, Etc.

1. I have supers that hold 7 movable-frames, 4 sections to each wide-frame. Will bees store as much honey in them as in the T super with tin rests where sections can't be taken out when filled as with wide-frames?

2. Some of my friends claim that taking out a frame when filled and putting in one filled with foundation, will stop the bees from working for some time. Is it true?

Sandwich, Ont. J. L.

ANSWERS.—1. I don't think the bees would notice the differeuce. The difference in supers is generally not a difference it makes to the bees, but a difference to the bee-keeper in handling. If you nail the sections solid into the supers so they can't be taken out without breaking, the bees would fill them just as well, but it wouldn't suit the bee-keeper. But I don't know how to manage T supers so the sections can't be taken out. I can take sections out of T supers more easily than out of wide-frames, and I've used wide-frames by the thousand.

2. That depends upon circumstances. If bees are getting a big flow of honey, they'd keep right on. If getting almost nothing, they would be very slow about starting on foundation.

Starting in Bee-Keeping.

Please tell what it should cost one to start with, say 10 colonies of bees, itemizing the articles. T. H. B.

Marcuse, Calif.

ANSWER.—That's a hard one. Indeed, it's beyond me, for more than one reason. Prices of bees vary very much, in some places being two or three times as much as in others—yes, a good deal more difference than that. Again, it makes some difference whether you get an outfit for comb honey or extracted. But I can help you a little. I can give you some idea as to what you ought to have, then you can find out what

prices you can get the different items for, by consulting price-lists. The 10 colonies of bees you probably ought to get close by home, for you can easily send far enough for them so that the transportation shall be more than the cost of the stock. On the whole, I think I'll make out a list with prices, and although the prices may be somewhat out of the way you can correct by comparing with price-lists:

1 Text-Book on Bee-Keeping	$1 25
1 Bee-Veil	50
1 Smoker	1 00
10 Colonies of Bees in good movable-frame hives	60 00
30 Supers, in flat, with separators	3 50
3,000 Sections	8 00
30 Pounds Surplus Foundation	15 00
Total	$89 25

I might safely say that by the time you've paid freight you may not have a great deal left out of a hundred-dollar bill. But as I said before, some of these prices may vary a good deal. You can get a good smoker for half the money I've mentioned, but at the end of a year it won't be very good, so it's better to pay more at the start.

I know it isn't very satisfactory to have an answer given, and then to be told you can put very little reliance on it, but unsatisfactory as the answer is, I've put a good deal more than the usual amount of thinking on it. If you'll send me something easier, I'll try real hard to select some better answers.

Hemp as a Honey-Plant.

I send you a sample of plant and its seed, that comes up of itself every year. It seems to be a great bee-plant, as the bees work on it early and late, and the hens are crazy for the seed. Will you kindly say what it is? and if it would pay to sow it in waste places? About what is the seed worth? The plant has a very disagreeable odor, especially in damp weather. It grows seven and eight feet tall, with wide spreading branches like a tree, and yields lots of seed.

Severance, N. Y. MRS. J. M.

ANSWER.—I'm not good at recognizing plants, but it happens that you send one with which I am familiar—hemp. You will find seed such as you enclose sold at the stores for canary birds. It might be well to scatter seed in waste-places and let it get a start. I don't know the value of the seed, but knowing the name you can inquire of any dealer in seeds and grains.

Let me call your attention to an interesting feature of the hemp plant. If you will look, at this time of the year, you will find plants still green bearing seed, and you will find others that are entirely dead. These dead plants have no seed on them, never had, and never can have. In the early part of the season they are flourishing enough. They are the staminate or male plants, and after they have furnished pollen for the pistillate plants, being of no further use, they die. The pistillate plants continue vigorous, and go on maturing the seed.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

The International Bee-Keepers' Congress.

This Congress will be held Dec. 4 and 5, during the Exposition now in progress at Atlanta, Ga., and it promises to be a large and representative body of bee-keepers from all parts of the United States. Excursion rates to the International Exposition at Atlanta are very low. Hotel and boarding-house rates have not been raised, but we are trying to get reduced hotel rates to bee-keepers and their families. Excursion tickets are on sale at Chicago, New York, and other Western and Northern cities.

The convention will be a business one—essays from some of the most successful honey-producers will be read, and questions involving the future prosperity of the bee-keeping industry will be considered.

Further information will be given those bee-keepers who intend going to the convention, if they will write Dr. J. P. H. Brown, Augusta, Ga.

The Swarming Season and Theory.

There is such a thing as a swarming season. Bees do not swarm indiscriminately through the whole summer, even if the honey-flow is favorable. Where the honey-flow is short, the swarming season corresponds with it, and both take place together, hence the idea that the honey-flow is the cause of the swarming. That idea is incontestably true, but other causes play a part in the program.

In California, where the honey season lasts several months, the swarming occurs during the early part of it, and is over before the honey-flow has even begun. All the Californian writers are unanimous on that point.

Mr. Aikin, in his writings on removing queens to prevent swarming, said that in his former location the main honey-flow takes place in the fall of the year, and that he was not bothered by swarming. But when he moved in a location where the main honey-flow occurs in the early part of the season, the swarming question became a serious one, and he eventually came to the practice of removing queens to prevent swarming. In my locality, and with sufficient room in the hives, little, or very little, swarming takes place after June 1, however abundant the honey-flow may be.

Then, there is a swarming season during the early part of the summer, or rather during the spring. Why is it so, and what causes it?

Well, I suppose that Mr. Doolittle and Mrs. Harrison will say that it is a law of Nature, so that the swarms may have time to build up before winter. I guess they are right, but we must remember that Nature or the Creator, God himself, works through means, and that behind every effect we find a cause that produces it.

During the winter the bees are huddled close together in a compact cluster, the interior of which is at a normal temperature, while the space outside of it may be even below freezing. As the season advances, and the weather gets warmer, the cluster expands itself, brood-rearing begins, honey is brought in, but all the work done is only inside of the cluster, as the temperature is too low outside of it to admit of anything to be done. As the weather gets warmer the cluster becomes larger, and finally, when the summer is decidedly come (about June 1, in this locality), breaks up altogether, and the bees will be found at work through the whole hive.

In the above, I think we have the key of the situation. Just as long as the bees are confined to the cluster, they are cramped, and cramped badly, for space, and that lack of space causes them to swarm. That cluster, so far as they are concerned, and for all practical purposes, constitutes the real colony, no matter how large the hive proper may be. In fact, the larger the hive, the worse it is for being more difficult to keep warm, it necessarily compels the bees to cluster closer. Hence, the necessity of not giving too much space in the spring, and not putting on the surplus-cases too soon; hence, also, the fact that a large hive may not always prevent swarming during the early part of the season. A few years ago, one of our prominent apiculturists put a colony of bees, early in the spring, into a dry-goods box, and, seeing them swarm, hastily concluded that a large hive has nothing to do with swarming.

Little or no swarming takes place even in the spring when producing extracted honey. In that case empty combs are given to the bees, and all they have to do is to put the honey in. This can be done at a comparatively low temperature, and in a comparatively short time—perhaps a few hours in the warmest part of the day would be sufficient; while, when working for comb honey, it might not be possible for the bees to build the necessary comb, or even draw the foundation, for lack of sufficient warmth in the surplus apartments.

Now, don't misunderstand me. The point I want to make is, that a large hive will not always prevent swarming in the early part of the season, because, on account of lack of warmth, the bees occupy only the space of the cluster, or rather the combs that they can well cover, and therefore have not space enough, and this lack of space causes them to swarm.

Later on, the situation is altogether different. With real warm weather, the bees can work through the whole hive, and therefore have plenty of space if the hive is large enough. But if the hive is too small, they will swarm, no matter what time of the year it may be, provided, of course, that the honey-flow and other necessary conditions are favorable.

Of course, all this refers to bees under normal or ordinary circumstances. Exceptional cases must be explained by the exceptional circumstances that cause them.

THAT SWARMING THEORY.

A few months ago I advanced the theory that the swarming was the result of dissatisfaction caused by the animosity of the queen toward the queen-cells; and also that the construction of the queen-cells took place when the young bees had more larval food than the queen and the brood could consume.

As to the first part of the above explanation, I think few apiculturists will deny that the presence of the queen and queen-cells together is a necessary condition. Of course, bees and queen will sometimes swarm a day or two after the queen-cells have been destroyed by the apiarist, but nevertheless these queen-cells were the cause of the dissatisfaction and subsequent swarming. And it is probable that in the great majority of such cases, a queen-cell has been overlooked. Only those who have been practicing cutting cells to some extent, know how difficult, or even impossible, it is not to miss any. I had one built in the thickness of the comb. All that could be seen was a capping somewhat pitted, and of an appearance differing from the environing brood, but nobody would ever think that it was a queen-cell—at least, I didn't. But after the queen was out, and gone with a swarm, the hole she had cut to come out told the tale.

Of course bees will sometimes swarm, or rather abscond, from some other cause—excessive heat, being bothered by robbers, etc.—but in such cases they go without caring whether they have queen-cells or not.

Exceptional cases must be explained by the exceptional circumstances that causes them. For instance: Dr. Miller says he had one colony swarm without any brood, and only a single egg in the combs. Exactly why they swarmed "I don't know." I would suggest that they concluded that the Doctor was getting decidedly too meddlesome, and becoming a regular nuisance, and that it would be better to seek more congenial quarters, even if they had to abandon that unfortunate egg (see Dr. Miller's comments in "A B C of Bee-Culture").

As to the cause of the construction of queen-cells, I was perhaps rash in saying that they were constructed primarily for storing larval food, but I think I am right in saying that they are constructed when there is a surplus of larval food on hand, and they want to utilize it in some other way.

Excepting the case of loss or failure of the queen, queen-cells are constructed only when three conditions are present, viz.: 1st, a honey-flow; 2nd, a number of young bees; and, 3rd, the laying of queen restricted by either the lack of space (or rather, empty combs), or a failure in the fecundity of the queen. In the face of such conditions, I cannot see any other possible explanation of the construction of queen-cells than the one given above; but yet I only claim that it is the best I know, and I would gladly learn more about it.

Mr. Hasty says the antipathy between queens and queen-cells is a result of the hate between queens; and he thinks that if a queen tolerates a newly-constructed queen-cell, and attacks an old one, it is because when the larva has attained a certain age it begins to acquire the odor peculiar to the queen. I think this explanation is correct, and "explains" not only the case of queen vs. queen-cells, but also why when a queen-cell just capped is introduced in a strange colony, it is sometimes destroyed by the bees, while one ready to hatch is not. The last one has already the full scent of a queen, and is respected as such, while the immature one is, to them, only a piece of strange wax. Also, a queen (unless hindered by the bees) will never miss a queen-cell in a hive, no matter how irregular in shape it may be.

FINDING QUEENS—NECTAR-SECRETION.

A few weeks ago, I had visit from Mr. Sam Wilson, of Cosby, Tenn. We had a bee-keepers' convention of two, which was a real pleasure to me. Mr. Wilson, being situated about 14 miles from the railroad, and having but an insignificant local market, prefers to produce extracted honey. He uses the Heddon hive in preference to all others, and says that he finds no particular trouble in taking the frames out and putting them back. They are easy to uncap. The knife is placed across, and slides through the length of the comb, being supported by the bottom and top bars. After one or two uncappings, the combs gets perfectly regular.

To find the queens, he lays the hive on a cover, or other board wide enough, blows some smoke between the combs, and lifts the hive. The queen is found on the board. If the brood-nest is composed of more than one section, each section is treated separately.

He thinks that for each kind of tree or plant to yield honey, or rather nectar, there is a time when a certain amount of moisture in the ground is necessary. In this locality, and in most of the United States, November for the sourwood, and November, or rather December, for the basswood, etc. His idea is, that the nectar is (partially at least) found in the ground before going up into the plant, and that unless there is rain, or rather moisture, in the ground at the necessary time to form it, the plant cannot yield any, no matter how favorable the weather may be later on. I give his views for whatever they may be worth.

Knoxville, Tenn., Oct. 9. ADRIAN GETAZ.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Langstroth on the Honey-Bee.—"I am happy to learn from my friend, Mr Langstroth, that a new edition of his work on the Hive and the Honey-Bee is called for; I consider it by far the most valuable treatise on these subjects, which has come under my notice."—Rev. Robert Baird, in "Introduction" to the third edition of "Langstroth."

Just now it seems a fitting thing to recall the attention of the readers of the Bee Journal to this valuable publication. Modern apiculture owes a debt of gratitude to Langstroth, for the hive he gave to the world, which it can never pay, but it owes him equally as much, if not more, for the book he wrote in order to make his hive and method of manipulation known. Many good books have been written since on bee-culture, but Langstroth yet remains *the* book on the subject, and one which no bee-keeper can afford not to own. It marked the beginning of scientific apiculture in America, and blazed the way for all that has come after it.

Almost every industry and department of learning dates back to some individual who was an original investigator, and paved the way for the knowledge and progress of future generations. History and Geography had their Herodotus; Medicine had its Hippocrates; Astronomy had its Copernicus; Evolution had its Darwin; Botany had its Linnæus; Biography had its Plutarch; and American Apiculture had its Langstroth. While the world has made great progress since any of these men lived and wrote, yet one is surprised, when he makes a careful study of the results of their investigations, to see how little there is that is absolutely new in later works. Especially is this true with regard to apiculture. Methods of manipulation have changed somewhat since Rev. L. L. Langstroth first wrote his book, and we are a little more certain about some things which were only held as a theory by this learned, practical pioneer of bee-culture; yet one need not go far astray who will study thoroughly and carefully the teachings of the first edition of his masterly and fascinating work. The moment one begins to read he feels himself in sympathy with the writer, and he is held to the subject with all the fascination of a story, by his clear-cut sentences and easy-flowing diction. I may say in a word that "Langstroth on the Honey-Bee" reads like a story, and is at the same time so authoritative and reliable that the reader feels that it is absolutely free from every taint of fiction.

In this respect the last edition is no improvement on the first, but its revision by those eminently practical and successful apiarists—"The Dadants"—has brought it down to date, and placed it *en rapport* with the scientific apiculture of today. This, as I suggested before, makes it absolutely necessary to every one who would be abreast of the times in modern apiculture. With no intention to disparage other works, or to detract from their value, I will say that I look upon the "Revised Langstroth" as the cheapest and best book on the subject of apiculture published in America.

Dzierzon in Germany and Langstroth in America wrought a revolution in apiculture. Langstroth made a step in advance of the noted German and gave the world, as the result of original investigation, a book—Langstroth on the Hive and Honey-Bee—which furnished to all future writers on the subject the essential facts which they have embodied in their works; so that he who owns the last edition of "Langstroth" comes very near having the alpha and omega of modern apiculture.

[The above book is found in the book-list often printed in the Bee Journal. Its price is $1.40, postpaid: or clubbed with the Bee Journal for one year—both for only $2.10. Better order a copy of "Langstroth on the Honey-Bee," when renewing your subscription.—EDITOR.]

The American Bee Journal
ESTABLISHED IN 1861
OLDEST BEE-PAPER IN AMERICA

George W. York, - - Editor.

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Editorial Budget.

An International Bee-Congress has been announced several times in the Bee Journal, to be held at Atlanta, Ga., Dec. 4 and 5. It occurs while the great Southern Exposition is in full blast. Dr. J. P. H. Brown, of Augusta, Ga., the conductor of the Southern Department of the Bee Journal, has the matter in charge, and can give you any particulars about it that you may wish to know. It will be a fine opportunity for the bee-keepers of the South to get together and discuss matters of interest to the pursuit in that melliflu-ous portion of our great country.

Reports Encouraging and Discouraging, Gleanings says, were about equally divided for August and the forepart of September, but lately there seemed to be more of the encouraging sort. Good fall honey-flows have been reported in many parts of the country, which made feeding unnecessary.

The Minnesota Apiarian Exhibit at the State Fair, held at Hamline, in September, was very creditable to Minnesota bee-keepers, as the season had not been promising for fine honey. The Farm, Stock and Home says that the display of comb and extracted honey, beeswax, cookery in which honey was used instead of sugar, honey-vinegar, etc., was certainly the best yet made in Minnesota. Wm. Urie and Dr. Jacques, of Hennepin; Mr. Howe, of Olmstead; Mr. Theilmann, of Wabasha; Mr. Turnbull, of Houston; Mr. Aldrich, of Rice; and Wm. Bright, of Wabasha, were all prize-takers. Dr. Jacques spent the summer of 1893 at a Forestville apiary, learning to produce fine comb honey, and the proof of his success was an exhibit of three cases of comb honey, on which he took two first and one second premium, for perfection of capping and general finish and shipping quality. Mrs. Wm. Urie, as usual, took first premium for cookery and canning in which honey entered in place of cane-sugar.

Advertising the Honey-Business.—During the first 19 days of last month (October), there was held in Chicago the second annual Pure Food Show, in one of the buildings with large ground floor space. This space was divided, and the use of it sold to prospective exhibitors.

Mr. J. A. Lamon—one of Chicago's prominent honey-dealers—put in an exhibit of honey, and kept a young lady in charge of it during the whole time of the Show. The use of the space occupied cost him $100, and this together with other expenses, including the honey samples given away to the thousands who visited the various exhibits during the nearly three weeks of the Pure Food Show, amounted to an outlay of about $200.

Samples of extracted honey were given out on crackers about an inch and a half in diameter. The lady in attendance kept a tumbler of honey on the counter, and with a teaspoon dipped a good, big taste of honey on the cracker, which was then handed to the visitor, who ate the whole thing with evident relish. About 5 gallons of extracted honey per day was thus given away. It was a splendid method of introducing pure honey.

Mr. Lamon's representative also took orders for honey all the time, and sold quite a good deal of both comb and extracted, in regular grocery style.

I might say here, that each exhibitor had put up a neat canvas booth, with a counter extending around the outside, thus enclosing a small space wherein the attendant stood, and also where the supplies were kept.

A very attractive feature of Mr. Lamon's pure honey exhibit, was a fine colony of bees in a glass hive, placed on the counter where all could see it. It is almost needless to say that there was a good-sized crowd of city folks around the bees all the time. And many were the exclamations of surprise at the (to them) wonderful sight. And more were the questions asked.

To make the bee and honey part of the Show still more interesting and fascinating, Mr. Lamon offered three prizes for guessing the number of bees in the hive. Everybody was free to put in their guess, and there were some 8,000 who did so. The first prize offered was $10; 2nd, $5; and the 3rd, One Dozen Jars of Lamon's Pure Honey. The result of the "guessing contest" was as follows: Fred Bennett, of Chicago, received the 1st prize, his guess being, 40,055 bees. Miss Nettie Watson, of Jackson, Mich., and Rose Lowenstein, T. L. Penny, A. S. Purrington, and C. J. Ratcliff, of Chicago, all guessed 40,000, entitling each to a share of the 2nd prize. The third prize went to Fred H. Tischell, of Chicago, who guessed 40,323. The number of bees in the hive was 40,050.

Since the Pure Food Show closed, one of the largest general merchandise stores here has begun a similar exhibition in its own store. It began Tuesday, Nov. 5, I believe, and there were two exhibiting and selling honey.

I do not know of a better way to get people to use honey, than to follow the above plan whenever and wherever possible. Every grocery store throughout the country should keep honey before its customers, and call attention to it by giving "free tastes." People usually want to know in advance what they are buying.

A letter received from Mr. Lamon, dated Oct. 15, 1895, has this to say concerning his effort to advertise and introduce honey:

MR. GEO. W. YORK—*Dear Sir:*—I think (or have learned, rather) that extracted honey is hardly more than introduced to the consumers, and if the method I have adopted at the Pure Food Show were practiced throughout the country (especially in large cities), it would be a matter of a short time before it would teach the people what the article really is, and educate them to distinguish between pure and adulterated honey.

The teachers of the city kindergartens are interested, and from me have obtained wax, comb-cells, honey, etc., to demonstrate to the children the habits of the honey-bees, their uses, etc.

We have, I think, the most interesting and instructive exhibition in the hall, and we sample out from 3 to 5 gallons of honey a day. The advertisement we get from it will, we figure, repay us handsomely, and the direct benefit honey and wax will receive therefrom is beneficial. J. A. LAMON.

I feel quite sure that on account of Mr. Lamon's enterprising efforts, honey will be called for much more frequently hereafter at most of the 5,000 grocery stores here in Chicago.

And then the demand will be increased, for grocers will soon order a supply of what their customers want. Once get the people in the habit of ordering honey with their other groceries, and soon it is going to require a large amount of honey to supply the demand. But in order to hold the family trade after getting it worked up, grocers *must* be sure to sell only *pure* honey, and that which is of the better grades. The glucosed stuff must be discontinued, and all insist upon getting pure honey only.

Jake Smith has another "letter" in Gleanings for Nov. 1. It has been a long time since Jake has been heard from. He ought to change his name to "Rip Van Winkle." Who is Jake Smith, anyway? Where does he live? He seems to be afraid to give his address. I don't believe anybody by that name takes the Bee Journal. But it's just as well, for he couldn't read it if he did. Why, the fellow can't spell! I should think Gleanings would send him a spelling-book and a "primary" dictionary, to start with.

Preparing Colonies for Winter.—That expert apiarist and helpful writer on the subject of bee-culture—Mr. B. Taylor, of Minnesota—gives in the Farm, Stock and Home, the following directions for preparing bees for their wintering in the cellar:

There are many ways of fixing the hives for winter, but doubtless the cheapest plan is to leave on the board hive-covers sealed down tight, but with the bottom-boards entirely removed. The first tier of hives should be set eight inches apart, and the next tier be set on top of these, and directly over the space between each two hives; the next in the same way on top of these, until as high as wanted. Another good way is to cover the hives warmly with quilts or building-paper fastened down tight to the hive with strips of lath or other wood, the bottom-boards to remain on, but the hives to be raised at least one inch above it by strips of wood. My own hives have an entrance the entire width of the hive in front and rear. I leave both thus fully open, and it seems to answer all purposes.

From Nov. 1 to 15 is the proper time to put the bees into winter quarters in this climate.

Superstition.—"Among the peasants of Livonia the genuine bee-keeper never pronounces the word 'bee,' as he believes the expression would inevitably bring misfortune on his apiary. He always speaks of them as 'forest birds,' and however frequently and severely he may be stung, he bears the pain with mute, stoical fortitude; never giving utterance to his feelings, for fear he should offend his 'forest birds!'"—American Bee Journal, Vol. 1, 1861.

Symposiums are to be a feature of Gleanings in the future—something like the Review was in its first few volumes.

Among the Bee-Papers

Gleaned by Dr. Miller.

FATHER LANGSTROTH IS DEAD.

Dear, old Father Langstroth, so long the idol of bee-keepers, has passed away. Death came Sunday, Oct. 6, in the form of apoplexy, while he was preaching at a church in Dayton, Ohio, where he lived. In a long talk that he and I had at Toronto he referred so feelingly to the wife of his youth—not a day of the long 20 years since she was called hence that he has not thought of her and longed to be with her again. Now they are together. "The grand old man" was the title given him revereutly by admiring friends, and never was a title more deserved. A grander, truer man I never knew. Long will his memory be green in the hearts of bee-keepers and friends.—Review Editorial.

AMERICAN BEE JOURNAL.

E. E. Hasty says in Review: "This paper deserves a good word for the way it has kept up its interest of late. Several other papers have done fairly well; but it rather seems to me that for the current year this one deserves first prize." And Editor Hutchinson says: "The American Bee Journal receives high but well-deserved praise at the hand of our friend Hasty this month. If there is a hustler in our ranks it is Bro. York."

But what reckless individuals those two H.'s are, to run the chance of being mobbed by the "Anti-Mutuals!"

WILL BEES HAVE COMB BUILT DOWN TO THE BOTTOM-BAR?

A certain person of the female persuasion for a long time continuously cast a gloom over my life by insisting that no matter how successful I might be in getting combs built down to the bottom-bar, the bees would in time open up a passage-way there. Finally, I showed her the answers to Query 989, and considered her "settled." Now comes to her "aid and comfort," in Review, from the gentleman with the rapid name, who each month saves the name "Review" from being a misnomer, who discourses thusly:

'Pears like my name ought to be Joseph—leastwise I feel strongly inclined to "teach the senators wisdom." Query 989 in the American Bee Journal Question-Box is whether bees will open a passage over the bottom-bar after it has been closed up once. Nearly all say "No," and only two frankly say that they will. Now I have the impudence to "yawp" right out that the crowd are clearly wrong, and the lean minority right. Of course they have all transferred comb from boxes to frames, and have examined the frames after the bees had fixed them up, and remember that there was no gnawing at the bottom. This perfectly sound fact—this little knowledge which is a dangerous thing—has misled them. They just didn't follow on to notice that little by little, year after year, the comb next the bottom-bar grew lean and disappeared. I plumply don't believe that six out of 26 can show any number of transferred or inverted combs that have been in use seven years *in the brood-chamber only*, and now in any other condition than the usual one—that is, with a bee-space above the bar for at least half way across.

Another fact also misleads: Most of the said "senators" have lots of extra combs for the extracting-supers; and they are nicely fastened to the bottom-bar, those not so originally soon becoming so. It is not in the super but in the brood-chamber that this gradual mischief transpires. And the question, "What can bees want a second bee-space there for?" also helps to mislead. The fact is, they do not want it. It is not on account of the passage, but on account of the everlasting call for just a little more wax to cap the brood with, and because it's so handy to go down to the bottom of the comb and pinch off a little there.

AFFLICTED EDITORS.

E. R. Root has been "under the weather" a good share of the past summer: I have been far from well the past summer, at one time being confined to my bed; and when I learned that R. F. Holtermann had had a severe attack of heart failure, followed soon after by typhoid fever, I was on the point of writing Bro. York that if he expected to be "one of us" he must contract some sort of an ill, when a postal came from him saying that he was sick in bed with tonsilitis. I guess we will all feel better when it comes cool weather.—October Review.

SPRING PACKING OF BEES.

Last year an extensive experiment in the packing of bees during the spring months was made, with a view of determining whether any benefit was to be derived from such protection, or, to put it in another way, whether the warmth retained by the packing more than counterbalanced the sun heat shut out by it. The result proved the packing to be disastrous for a spring of the character of that of 1894, with bees in the condition those used for that experiment were in during that time. Many of the colonies were weak in numbers and some of them not in the best of health. The spring losses were disproportionately large, and the colonies that survived did not do so well as did those without any protection.

The importance of the matter prompted me to repeat the experiment the present spring, but on a much smaller scale, since I had become satisfied in my own mind that at the best it could not prove very profitable. Twelve colonies were

selected for the purpose, a history of whose condition, reaching back to the preceding fall and up to the time when the packing was removed, June 12, was carefully kept. Some of the colonies showed more or less signs of having voided excrement during winter, before removed from the cellar, but after their first spring flight I considered them to be in excellent health and of considerably more than the average strength for the season. So far as the rearing of brood was concerned, all the colonies were substantially alike when the packing was done, which was effected as soon as they were thoroughly settled after removal from the winter quarters. At that time brood-rearing was only fairly begun, there being capped brood in each, covering a comb space of eight or ten square inches, and young brood and eggs covering a space equal to about one-half a Langstroth frame. The 12 colonies were divided equally into two lots of six each as impartially as possible, that the two lots might be as nearly alike as possible in all respects. Before doing this the colonies were again weighed, this time and the subsequent time the bottom-board of each being included. As will be seen, the advantage in the division was slightly with the lot packed both in the average strength as well as in the total weight. A table is given here-

COLONIES PACKED.

No. of colony.	Relative strength.	Signs of excrement in spring.	Weight fall, lbs.	Weight spring, lbs.	Weight April 13th, lbs.	Weight June 12th, lbs.	Amt. of brood June 12th, No. Heddon frames.
1	6	some.	48	35	38¾	38½	7
2	6	"	62½	46¾	48	49	8½
3	7	none.	60¾	46¾	46¾	47¾	10
4	7	"	65¾	54	51⅜	52½	10
5	7	much.	54	42	40¾	41¾	8
6	10	none.	70¾	55¾	55¼	65½	10
Total	43	.....	361¼	279¾	280¾	297	54
Average	7.16	.....	60 21	46 63	46.71	49 5	9

COLONIES NOT PACKED.

7	5	none.	47¼	36¾	39¾	37½	7
8	6	a little.	65	50¾	53¾	49½	8
9	6	"	48½	37¾	38¾	41⅞	8½
10	7	"	54½	44½	44¾	50½	10
11	7	none.	53¾	47	46.	45½	9
12	10	a little.	62¾	49	49¼	47½	12
Total	41		327¾	267¾	272	272	54½
Average	6 83	..	54 54	44 54	45 33	45 33	9 04

with showing the condition of each colony in detail at different times, including the weights and amount of brood at the time the packing was removed, shortly before the middle of the present month.

In order to make the experiment a crucial one for bees under like conditions during a spring of like characteristics, the greatest care was taken in attending to all the details. A platform was placed under each of the colonies to be packed, to effectually prevent the packing material from attracting any moisture from the earth. Each one was surrounded with a box of such size as to allow a space of two inches between it and the hive in front, and from three to four inches at the rear, on the sides and on the top, planer shavings freshly made from dry pine lumber were used, packed moderately hard, for filling these spaces.

The table largely explains itself. Advantageous results are shown in two ways, viz., by increased weight and by the larger amount of brood. In the latter respect the difference is hardly appreciable, but that difference though less than one-half of one per cent. in favor of the colonies without spring protection. In the former point the colonies not packed just hold their own, while those packed show an average gain of about two and three-fourths pounds, so we may set it down as the net advantage of packing in this experiment that it effected a saving of two and three-fourths pounds of honey per colony, though the force of the conclusion is much weakened by the fact that one of the six colonies gained nearly two-thirds of the total 16¾ pounds gain. On the other hand that protection effected some saving is rendered tolerably certain by the fact that each of the protected colonies made at east a little gain while all except two of those without protection lost in weight. But granting that two and three-fourth pounds of honey saved is a fair exponent of the advantage to be derived from spring protection, what shall the verdict be with regard to the policy of giving such protection? At best this would be barely sufficient to pay for the labor of packing and unpacking the colonies, leaving nothing to recompense the procuring and storing of material. Taking this into account and the result would show a considerable percentage of loss in the operation. But circumstances might perhaps be easily changed so as to put an entirely different face upon the matter. The colonies used in the present experiment are in a place pretty well protected from cold winds, which is a condition to be reckoned with. If this protection were wanting, spring packing might prove very profitable. Whatever the event may prove to be with regard to packing I am strongly impressed with the idea from my experience in this line last year and this, that the value of the spring sunshine is not appreciated as it deserves to be.—Hon. R. L. Taylor, in Bee-Keepers' Review, June 24, 1895.

Canadian Beedom.

Phenol Cure for Foul Brood.

On page 706, I. W. Beckwith says he has had some experience with foul brood, but has not tried phenol, nor will he until he gets more encouragement than I have given him to do so. What more encouragement can I give him than to assert that, properly used, it is an effective remedy? He quotes me very unfairly by merely giving my statement that all those who tried the phenol cure on its first appearance failed to make it a success. Why did he not add the reason I gave for their failure? Reason enough, surely. The bees never took the medicine. It was a case like that of the carpenter who was ill with inflammation of the lungs. The doctor prescribed a blister to be put on his chest. His wife put the blister on his tool-chest. So bee-keepers who tried phenol at first were content with putting it in the hive, whereas it is indispensable to a cure that the bees consume it.

I said this cure was "scientific," and gave as proof that carbolic acid is the most powerful antiseptic known to the medical world. Is it any disproof of that statement for Mr. Beckwith to say, "'Scientific' is a term nearly synonymous with 'humbug,' when used in relation to patent medicine and patent rights?"

Mr. Beckwith thinks the drug may kill both the microbe and the spore, but asserts that every cell in the hive which has ever contained the diseased larvæ or foul honey contains the germ of the disease. There is no germ of the disease outside of the microbe and the spore. If these are killed the disease is cured. Every cell in the hive will be disinfected after the destruction of the microbes and the spores.

Mr. Beckwith has never tried phenol, and yet asserts that both Mr. Cheshire and Mr. Clarke are deceived. Is he warranted in saying this without trial? This is the way many deal with Christianity itself, which says to each and all, "Try me." "No," such reply, "Christians are deceived."

There is no difficulty, as he supposes, about using phenol during a moderate honey-flow. At about the 500 ratio bees will consume the medicated syrup, and that is strong enough to effect a cure. As a preventive of foul brood, fed in early spring, this remedy is cheap, easy and effective. Try it and be convinced. Wm. F. Clarke.

Guelph, Ont., Nov. 4.

Vicious Bees.

A North of England bee-keeper tells the Journal of Horticulture that he has never in his life found bees so vicious as they have been during the past season. Whether it was on account of the wet weather hindering him from being among the hives as much as usual, or from the abundance of honey, he does not know, but whenever he went near them the enraged bees would soon cover him.

This reads like an apocryphal kind of story. It does not accord with the usual laws of bee-life. In wet weather bees are chary of going out-of-doors, and when there is an abundance of honey, they are apt to be good-natured, and are far too busy in minding their own business to pay much attention to visitors. This bee-keeper must have been in a bad fix. The enraged bees would cover him, he says. If they were enraged they would surely sting. And this state of things characterized a whole season! Most bee-keepers enjoy being among their bees, listening to their cheerful music, and watching them at work. But this one found apiary only another name for purgatory.

Bee-Keepers and Apiarists.

A bee-keeper is one who keeps bees. An apiarist is one who understands the nature and habits of bees, knows how to manage them, is constantly studying their ways, and keeps a vigilant watch over all things affecting their welfare. I am

continually surprised at finding people who are trying to keep bees without giving themselves the least trouble to learn the business in which they are engaged. They have no apicultural manual to consult when any difficulty arises. They do not take a bee-journal, and therefore get no suggestive hints. They are "going it blind." This is the great source of failure. It is the same in other occupations. A man starts at storekeeping. He is ignorant of goods, markets, and the wants of customers. Before long, he is sold out.

The great cause of agricultural depression to-day is ignorance of the foundation principles of farming. Any fool can grow crops while the richness of a virgin soil lasts. But to keep that soil up to its primitive fertility, and get as good crops when the land has been tilled for half a century as were yielded at first, is another matter.

In a recent number of the Kansas Farmer, a man told how he raised 64 bushels of wheat to the acre. First year, cabbages with 60 tons of barnyard manure per acre. Second year, potatoes with no manure. Third year, 64 bushels of wheat with no manure. With such a yield wheat would give a living profit even a 50 cents a bushel.

It is absurd for people to embark in a business they know nothing about, and then when they fail abuse the business. They should kick themselves. The complaint we hear so often that farming doesn't pay is a confession of incompetency. It is the same with bee-keeping. No one abuses the business who is an apiarist, and not merely a bee-keeper.

Bee-Keeping for Ministers.

Many ministers have insufficient incomes, that need supplementing either by home missionary grants or imitation of the apostle Paul's example, who said: "These hands have ministered to my necessities and them that were with me." As an expedient in the way of self-help, bee-keeping is worthy of consideration. It is not hard physical work, nor does it require an exhaustive putting forth of brain-power. It gives gentle exercise in the open air, brings into contact with the forces and beauties of nature, and is a most interesting, fascinating study. A recent writer on the subject calls it "the pleasant occupation of tending bees."

Bee-keeping is, moreover, quite a clerical pursuit. Some of the most distinguished apiarists have been ministers. Langstroth, Dzierzon, Quinby, Harbison, Miner, Mahin and others are all familiar and noted names of clerical bee-keepers. The late Rev. J. Vogeler, Missionary to the Indians at Moravian Town, Ont., stated in a letter published in the Canada Farmer of Feb. 1, 1864, that in 1843 he obtained a swarm of bees from a hollow tree in the woods, and the profits from that wild swarm had, in 20 years, paid for a farm of 219 acres of land. Not to multiply instances, the following capital story, copied from the Mark Lane Express, the leading agricultural journal in Great Britain, doubly bears on the matter in hand, being at once an example of clerical and profitable bee-keeping:

A bishop was holding his first visitation of the clergy in his diocese in a town in one of the Midland counties. Among those assembled he soon discovered an old college acquaintance whom he had not seen for a great number of years, but whom he greeted with all the warmth of a renewed friendship. On comparing notes with his friend, the bishop learned with regret that he was still a curate in a country village, at a stipend of a hundred pounds a year, and that he had a wife and large family to support. The worthy curate, however, invited the bishop to spend a day with him before he left the neighborhood, and the latter, not wishing to appear proud, accepted the invitation.

On reaching the parsonage, he was surprised to find his friend's wife an elegantly dressed lady, who received him without any of the embarrassment which a paucity of means is apt to occasion in those who feel its pressure. The children, also, were all well dressed and looked like anything rather than as having suffered in any way from the pinch of poverty.

But the good bishop's surprise was still greater when he sat down to partake of a repast, little short of sumptuous in all its appointments. Knowing that his friend was originally a poor man, he considered that he must have received a fortune with his wife. After, therefore, the latter and the children had withdrawn, the bishop expressed a fear that his friend had gone to an injurious expense to entertain him, and that it would entail privation upon him afterward. "Not at all," replied the curate; "I can well afford to entertain an old friend once in a while without inconvenience."

"Then," rejoined the bishop, "I must congratulate you, I suppose, on having received a fortune with your good lady?"

"You are wrong again, my lord," replied the poor curate.

More mystified than ever, the bishop resumed: "Then how is it possible for you to have those comforts around you that I see, out of a hundred a year?"

"Oh, my lord, as to that, I am a large manufacturer as well as a clergyman, and employ many operatives, which bring me in an excellent living. If you will walk with me to the back of the premises, I will show you them at work."

He accordingly took him into the garden, and showed him at the back of the house a large and splendid apiary, the source of the curate's prosperity.

The bishop never forgot the circumstance, nor did he ever fail to make use of it as an argument and example, for when he afterwards heard some poor curate complain of the scantiness of his income, he would cut the matter short by exclaiming, "There, there; let's have no more grumbling. Keep bees, like Mr. ———. *Keep bees!* KEEP BEES!"

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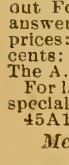

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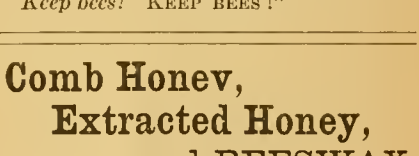

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General Items.

Appeal to Wisconsin Bee-Keepers.

Some of you have seen the report of N. E. France, in Gleanings for June, regarding the efforts that were made by the Southwestern Wisconsin and the Wisconsin State Bee-Keepers' Association to get the passage of a foul brood law providing a foul brood inspector for Wisconsin. Mr. France expended $25 in railroad fare and expenses while working to get the bill passed. The bill, as you know, was lost; but we as bee-keepers feel that we must not give up until we have accomplished our purpose of getting a law for our State similar to the Canadian law. We must have money with which to pay the expenses of Mr. France, and for a fund to provide for future expenses in pushing this matter through the legislature.

We therefore appeal to every bee-keeper and supply dealer in our State, or interested therein, to send your contributions for this purpose to N. E. France, Treasurer of the Wisconsin State Bee-Keepers' Association, Platteville, Wis., on or before Jan. 1, 1896; and if there are any who are unable to give us financial support, we ask you to write a letter to Mr. France, showing your desire to have this law passed, which is of such importance as a protection to our chosen pursuit. (Signed.)

F. WILCOX,
President Wis. State B.-K. Association.
H. LATHROP,
Secretary Wis. State B.-K. Association.
N. E. FRANCE,
President S. W. Wis. B.-K. Association.
M. M. RICE,
Secretary S. W. Wis. B.-K. Association.

Favors the Five-Banded Bees.

It has been a very poor season here in eastern Maine—in fact, the poorest I have known in the 16 years I have kept bees.

Mr. A. Norton, in Gleanings for Oct. 15, calls for fair play in regard to 5-banded bees, and wants all to give public testimony. With me they have proved to be the best bees I ever owned, all things considered, and I have given them quite an extensive trial. Some say the queens are not prolific, bees are cross, great robbers, and other "hard names."

In the spring of 1894 I bought ten 5-banded queens with a pound of bees with each queen, from a Texas breeder; also ten 2-frame nuclei colonies of the same breeder, and two 4-frame nuclei of an Ohio breeder—all of them 5-banded stock. The one-pound lots gave me from 20 to 50 pounds of comb honey; the two-frame lots gave me from 30 to 80 pounds of honey; one-half of both lots swarmed; the four-frame nuclei gave me 75 for one and 80 pounds for the other, and both swarmed. A full colony of 3-banded bees, that did not swarm, gave me 30 pounds of comb honey the same season.

In many cases where 5-banded bees have been condemned, I think they have not had a fair trial. In all cases where I have received queens by mail they have not come up to the standard for prolificness. Those bought in nuclei colonies have done extra well, but the queens I rear myself, under the swarming impulse, are the best. Some of the young queens reared from the 5-banded stock proved to be the most prolific queens I ever owned. In regard to wintering qualities, I do not find much difference. I winter my bees in the cellar.

J. E. GINN.

Ellsworth, Maine, Oct. 19.

Ants, Skunks, Laying-Workers, Etc.

I think that my bees, and, in fact, all of the bees in this section of the country for miles around, gathered a good deal of honey-dew the fall of 1894, consequently a good many colonies died or were greatly reduced in numbers. When we put them

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out in the spring there were but few bees in the hives.

Last fall I put into my cellar 98 colonies, and on the first of last June I had but 54 colonies left: some of those left their hives, and some I doubled up. Some bee-keepers here lost all of their bees.

My bees did not swarm at all last summer, and I have heard of but two swarms anywhere in this section of the country. I run 11 colonies for extracted honey, and got only 225 pounds. Then I had on my 1,200 sections, and got only 10 pounds of comb honey. I now have 40 of my best colonies to be put into the cellar for another year.

I have kept bees for about 50 years; if I live, I think that next year will be the last that I shall keep bees. When they swarm, and alight in large trees, it is almost impossible for me to get them, as I am too feeble and old. I have now passed my 85th year. I like to work among the bees. I am an old subscriber to the American Bee Journal. I took it when published in Philadelphia, and nearly all the time when published in Washington, and since in Chicago.

We are having a very dry time. We have had but little rain for a year and five months. Some that have dug wells say the ground is as dry down 7 or 8 feet as it is on the top.

I will now give a little of my experience with ants, skunks and laying-worker bees. It may be nothing new, but may benefit somebody.

ANTS.—Some times I have been troubled with ants. They live in little mounds. I then follow their trail to the mound, and dig a hole in it that will hold 3 or 4 quarts of water. Then get a pailful of boiling water and pour it in the hole in the mound. That will kill the most of them. Then I get a few stalks of tansy, and put some on the bouey-boards, and some on the ground around the hive. They will leave the hive.

SKUNKS.—Some years ago I was troubled with skunks. In the morning I would find several of the short pieces of board in front of the hives knocked down. I would get an egg, break a hole in the small end, and put in a little pulverized strychnine. Mix it in the egg. That kills them very quickly. I never had one get more than two rods from where they ate the egg, and they never leave any of their perfumery.

LAYING-WORKERS.—I had at one time two colonies that had laying-workers. I worked at times for two months before I could get a queen in either hive, or a queen-cell. The bees would destroy them every time. Three years ago I had five colonies that had them. My hives are all numbered. For instance, No. 1 had a laying-worker. About noon, when the bees were flying quite thick, I would select a strong colony; for instance, No. 10. I would set No. 10 where No. 1 stood, and No. 1 where No. 10 was. The bees would kill the laying-workers in a short time. I got rid of five laying-workers in one afternoon in that way.

WM. C. WOLCOTT.

Eldorado, Wis., Oct. 23.

The Southwestern Wis. Convention.

The Southwestern Wisconsin Bee-Keepers' Association met at the residence of E. France & Son, Platteville, Wis., Oct. 8 and 9, 1895. The meeting was called to order by the President, N. E. France. The attendance was not as good as usual, on account of the failure of the honey crop in this part of the country. Many were detained at home to feed their bees for winter, and many felt they could not afford to go. Although the attendance was small, we had a very interesting meeting.

The question-box was an interesting feature of the convention, and many questions were asked and discussed, and many new ideas brought out.

There was a good display of bee-fixtures, such as hives, extractors, feeders, foundation mills, comb foundation, bees and honey, and many other things that go to make up a good exhibit. There were pre-

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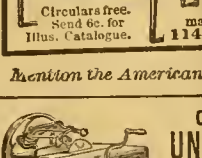

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A. C. BROSIUS, Cochranville, Pa.

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BERKSHIRE, Chester White, Jersey Red & Poland China Pigs. Jersey, Guernsey & Holstein Cattle. Thoroughbred Sheep, Fancy Poultry, Hunting and House Dogs. Catalogue.

S. W. SMITH, Cochranville, Chester Co., Pa.

42E25 *Mention the American Bee Journal.*

miums given to those deserving, and a number of them were carried away, as was shown on page 685.

The most attractive exhibit was the automatic reversible honey-extractor, of Van Allen & Williams. All present pronounced it the best they had seen.

Our foul-brood delegate, N. E. France, gave a report of the work he did in trying to get the foul-brood bill through the legislature. Although he failed, we hope to be in better shape at the next meeting of the legislature to push the bill, for our industry must be protected.

All enjoyed the meeting because of the hearty welcome and pleasant reception at the home of E. France & Son. The next meeting will be held in Wauzeka.

Boscobel, Wis. M. M. RICE, *Sec.*

[No doubt, Mr. Rice, the question-box was a profitable part of your meeting, but all would like to know something about the "new ideas brought out." Why not give a full report of those interesting discussions ?—EDITOR.]

Late Pollen Gathering, Etc.

As I was out in the bee-yard yesterday (Oct. 27) I saw bees carrying in pollen. I think this is the latest I ever saw bees carrying pollen into the hives. As there is quite a lot of dandelion in bloom, I think that is where it comes from.

There is quite a change in the weather since yesterday. The thermometer registered 62 degrees, Fahr., in the shade, and this morning it registers 30 degrees, Fahr. It is snowing quite hard. WM. CRAIG.

Luce, Mich.

Convention Notices.

CALIFORNIA.—The California State Bee-Keepers' Association will hold its next annual meeting in the Chamber of Commerce in Los Angeles, on Monday and Tuesday, Nov. 18 and 19, the first session commencing at 2 p.m. on the 18th. This meeting will be largely devoted to the subject of marketing our honey. A large and representative gathering is desired, for plans are to be considered that will have a vital bearing upon our future honey markets. JOHN H. MARTIN, Sec.

Bloomington, Calif.

ILLINOIS.—The Illinois State Bee-Keepers' Association will hold its annual meeting at the State House in Springfield, Nov. 19 and 20, 1895. The I. O. O. F. have their grand encampment, beginning on Nov. 19, and they have secured an open rate of a fare and a third for the round trip, from all points in the State. So we hope for a large attendance and a good meeting.

The Special Meeting of the Illinois State Bee-Keepers' Association will be held in Chicago, at the New Briggs House, northeast corner of Randolph St. and Fifth Ave., on Thursday and Friday, Jan. 9 and 10, 1896—the week of the National Cycle Show—when excursion rates will be given. Notice will be published later as to whether these rates will be on the certificate plan or otherwise. Chicago hotel rates are 75 cents each, per night, two in a room; $1.00 if one in a room. Meals extra—pay for what you order, or go elsewhere for meals, if preferred. JAS. A. STONE, Sec.

Bradfordton, Ill.

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CHICAGO, ILLS.

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It is a mistake to think that life is all a bed of roses.

It is a mistake to go through life and neglect the laws of health and life.

It is a mistake at any time to allow sickness or suffering of a serious nature to come upon you.

It is a mistake not to take advantage of the best discoveries of science for preventing disease and banishing pain.

It is a mistake if anyone has not learned that the best and most scientific preparation for accomplishing this is Warner's Safe Cure.

It is a mistake that people who are properly informed and warned do not take advantage of the warning and thus insure happiness and prolong life.

The Biggle Poultry-Book, like its predecessors, the Horse-Book and Berry-Book, is overflowing with good, sound, common sense. The enumeration of a few of the leading chapters will give an idea of the scope and character of the book: Early Broilers, Hens Expressly for Eggs, The Farmers' Flock, The Village Hennery, Fattening and Marketing, Diseases and Enemies, Chicks with Brooders, etc. Then there are special chapters devoted to Breeds of Chickens, Pigeons, Geese, Ducks and Turkeys, indeed the whole poultry yard has been systematically and fully covered. 160 pages; 120 illustrations. Its low price of 50 cents places it within the reach of everyone. It is a credit to its publishers and to the Biggle Farm Library. Address, Wilmer Atkinson Co, Philadelphia, Pa.

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lying along and owned by the Yazoo & Mississippi Valley Railroad Company, and which that Company offers at low prices and on long terms. Special inducements and facilities offered to go and examine these lands, both in Southern Illinois and in the "Yazoo Valley," Miss. For further description, map and any information, address or call upon E. P. SKENE, Land Commissioner, No. 1 Park Row, Chicago, Ill.; or, G. W. McGINNIS, Ass't. Land Commissioner, Memphis, Tenn.

46E4t *Mention the American Bee Journal*

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Oct. 16.—We never had as good inquiry for honey as this fall, and never sold as much. We have not received as good prices owing to the amount of California stock unloaded on this market, which was sold at a very low price, both comb and extracted. We quote: No. 1 and fancy, 13@15c.; amber and dark, 8½@11c. Extracted, 5@7c. Beeswax, 28c. J. A. L.

BUFAALO, N. Y., Oct. 14.—Honey is in good demand. We quote: Fancy, mostly 16c.; choice, 14@15c.; buckwheat sells slowly at 10@12c. Extracted very quiet. Will advance liberally upon all choice shipments of honey. Beeswax wanted at 28@30c. B. & CO.

CHICAGO, ILL., Nov. 7.—Comb honey, if fancy in all ways, sells at 15c., but the bulk of sales of white comb that grades No. 1 is sold at 13c. Amber or yellow brings 9@11c.; dark and brown, 8@10c., according to finish and flavor. There are large offerings of extracted at prices ranging from 4½@7c., according to color, body, flavor and package. Beeswax, 28@30c. R. A. B. & Co.

CHICAGO, ILL., Oct. 19.—We quote: Fancy white comb, 1-lbs., 14c.; No. 1 white, 13c.; amber, 12@12½c.; buckwheat, 10c. Extracted, as to quality and style of package, 5@6½c. Beeswax, 30c. S. T. F. & Co.

NEW YORK, N. Y., Nov. 8.—Demand for comb honey is very good, particularly fancy white, and is moving out about as fast as it arrives. We quote: Fancy clover, 1-lbs., 15@16c.; white, 13@14c.; fair, 11@12c.; buckwheat, 10@10½c. Extracted, buckwheat, 5@5½c, with supply equal to demand; white clover and basswood, 6@7c., with supply short and demand good; Southern, 50@55c. per gallon. Beeswax, 27@29c.; extra fancy, 30@31c. C. I. & B.

KANSAS CITY, Mo., Nov. 8.—The demand for comb and extracted honey is fair; receipts fair. We quote: No. 1 white, 1-lbs., 13@14c.; No. 2, 12@13c.; No. 1 amber, 12@13c.; No. 2, 10@11c.; dark, 8@10c. Extracted, white, 6@6½c.; amber, 5@5½c.; Southern, dark, 4@4½c. Beeswax, 22@25c. C. C. C. & Co.

ALBANY, N. Y., Nov. 9.—Our honey market is in good shape, although prices, like on most all products, are not high; but receipts are lighter than last year, and there is a good, steady demand, with a real scarcity of white honey. We quote: White clover, 15@16c.; mixed clover, 12@14c.; dark clover, 9@11c. Extracted, white, 6½@7c.; mixed, 5½@6c.; dark, 5@5½c. H. R. W.

CINCINNATI, O., Nov. 8.—There is a fair demand for honey, with a bountiful supply. Comb honey sells at 12@15c., according to quality, in a jobbing way. Extracted brings 4@7c. on arrival.

Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. M. & S.

NEW YORK, N. Y., Nov. 4.—The demand is good for all grades of comb honey, especially fancy white. We quote: Fancy white, 1-lbs., glassed or in paper boxes, 15c.; fair white, 12@13c.; buckwheat, 10@11c. Unglassed, fancy white, 14c.; fair white, 11@12c.; buckwheat, 9@10c. No 2-pound sections on the market and no demand for any. The demand for extracted honey has been rather limited of late, with plenty of stock arriving. We quote: California, 5½@6c.; white clover or basswood, 6c.; Southern, 45@55c. per gallon. Beeswax dull at 27@28c. for average quality. H. B. & S.

PHILADELPHIA, PA., Oct. 23.—Honey is selling freely, and good, choice comb sells on arrival. Pure Western extracted white clover sells very quickly and is in big demand. We quote: Fancy white clover, 16c.; choice, 14c., dark, 11c. Extracted, 5½@6½c.; pure white clover, 8@9c. Beeswax will not, in our judgment, advance much more, as it did last year, large quantities having been laid up at low prices. It sells fairly well at 26c. on arrival. W. A. S.

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

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A SIMPLE AND CONCISE METHOD OF PRACTICAL BOOK-KEEPING.

With instructions for the proper keeping of Books of Accounts and Numerous Explanations and Forms used in a Commerical business; showing an ENTIRE SET OF BOOKS BASED UPON ACTUAL TRANSACTIONS.

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Family Shoe Repair Kit. 28 Articles
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Payne's Business Letter Writer and Manual of Commercial Forms.—Containing specimen Letters on all possible business topics, with appropriate answers. Containing general information with regard to business matters, the rules for punctuation, the abbreviations most used in the mercantile world, a dictionary of mercantile terms, a table of synonyms, and other information which may be of value to the business man. New edition, revised and enlarged. 216 pages, Extra Cloth, 75 cts.

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Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Catching an Apiary Thief.

Query 996.—What method would you take to catch a thief that felt free to visit your apiary and slip out a comb here and there when you were absent from home?—Parsonage Apiary.

P. H. Elwood—Offer a reward of $25 or $50.

Mrs. L. Harrison—Keep Cyprian bees or a bulldog.

W. R. Graham—I would watch as closely as possible.

Dr. J. P. H. Brown—Set a tread or trigger gun for him.

Prof. A. J. Cook—I would have to know all the surroundings.

Eugene Secor—I don't know, but I'd catch him some way—if I could.

J. E. Pond—Watch for him capture him in the act, and then "go for him."

R. L. Taylor—I would set a watch if I expected the depredation to be repeated.

E. France—I have some trouble with thieves, and would like to know how to catch them.

Rev. M. Mahin—That is a hard question to answer. It would depend upon circumstances.

Dr. C. C. Miller—The only effort I ever made was to watch in ambush. But the effort was a failure.

J. A. Green—Probably the best plan would be to have some reliable person keep watch "on the quiet."

Rev. E. T. Abbott—I can't say what I would do. I have not had much experience in the detective business.

B. Taylor—I would watch for him and catch him by his coat tail, provided he had one; if not, I would seize him by his hair or whiskers.

C. H. Dibbern—I should set a trap for him; *i. e.*, leave some one to watch the apiary when the thief would suppose the folks were all away from home.

Mrs. J. N. Heater—While such a thing would be annoying and *mean*, yet if it were not repeated often enough to cause a considerable loss, I should prefer not to know just who did it.

Chas. Dadant & Son—If you know who he is, send him a comb of honey, and ask him to come to your house instead of your apiary for what honey he wants. That will stop him.

W. G. Larrabee—I think a good way would be to leave a good, trusty bulldog at home, and may be you could fit the piece of cloth that was found in the dog's mouth into the hole in the thief's trousers.

J. M. Hambaugh—Have a wire connected to the trigger of a shot-gun at one end, and secured at the other, and stretched through the yard so as to catch the foot of intruders. A blank cartridge is sufficient. They will never come back.

G. W. Demaree—Well, now my experience is with night prowlers. To keep this class of thieves out of my apiary, I have kept a sort of street-lamp burning all night, that casts its light over the entire apiary. If I had a daytime sneak to deal with, I would manage to make him believe I was going away to be gone all day, but instead of going away, I would "*lay for him.*" and give him a lecture on the moral law, if he was found transgressing.

G. M. Doolittle—Try the religion of Jesus Christ on him. You undoubtedly guess who he is. Make friends with him, and a little later give him 10 or more pounds of nice section honey, and that will punish him more, and do you *more good* than to use the law on him, could you "catch" him.

W. M. Barnum—Mark your frames, and set somebody to watching. It seems to me suspicion would naturally fall upon some hybrid bee-keeper, and that it would not be difficult to get proper authority to examine his apiary, and, if your combs were *marked*, to secure thereby sufficient evidence to convict the thief.

J. M. Jenkins—I would "lay for him," with a shot-gun, "not necessarily for use, but as a guarantee of good faith," etc., at some time when I was absent (?); or have a friend to do so for me. He is a very considerate thief, to take only "a comb here and there;" while most of them ruin a colony, or carry it away *in toto*.

H. D. Cutting—It is not much of a thief that takes but a comb "here and there." It may be some other preacher, for a joke. You should invite him to sit up with a good dog, and if you wanted to make it a little hotter for him, go out and preach to him for a few hours, just for practice. You will find 27 excellent texts.

Jas. A. Stone—Do as I once did for a watermelon patch. Load a gun with only powder, and attach a very fine wire to the trigger, where he will trip it. One day while at dinner we heard the gun. Said nothing about it. Before many days a boy not far away told that I shot at him in my melon patch. I was not bothered for years after.

Allen Pringle—As the question is signed "Parsonage Apiary," I take it that a parson asks the question. Well, Parson, I will tell you what I should do if I were in your place: I would try first to cure him by "heaping coals of fire upon his head"—not, of course, literally, but metaphorically, or rather, scripturally. As soon as I got home and found he "had been and gone and done it" again, I would count carefully the number of frames he had taken, then I would take a like number of frames—the exact number—and send them over to him accompanied by a note stating that you could ill spare those frames—that your colonies would suffer on account of their removal—but begging him to accept them, as you were convinced from what took place in your bee-yard in your absence, that he needed the frames very badly—perhaps worse than you did—and that you had accordingly sent them to him. If his cussedness—his "innate depravity" was such that this failed to melt him (to *burn* his conscience) then I would set a bear-trap for him, and pray night and morning that he get into it.

A Binder for holding a year's numbers of the BEE JOURNAL we mail for only 75 cents; or clubbed with the JOURNAL for $1.60.

Getting Ready For 1896!

We are now making necessary arrangements for manufacturing on a very large scale, EXTRACTORS, SMOKERS, and EVERYTHING used by the wide-awake bee-keeper. We shall continue to make our FALCON POLISHED SECTIONS, which are yet unequalled. If you've never used any of our Goods it is time for you to do so. They are acknowledged to be unsurpassed by any other make. Our large new Catalogue will be out early in the year. Anything you want now? Write to us. Goods and Prices guaranteed to be satisfactory.

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Cold-Blast Smokers,
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Send 10c for Practical Hints to Bee-Keepers.

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Thin Flat-Bottom Foundation

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Being the cleanest is usually worked the quickest of any Foundation made

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COMB FOUNDATION.

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Quality always the best. Price always lowest.

Working Wax into Foundation by the lb. **a Specialty.** I can make it an object for you in any quantity, but offer special inducements on straight 25 or 50 lb. lots. Or for making large lot of Wax into Foundation. I am furnishing large Dealers, and can also please you. **Beeswax taken at all times.** Write for Samples and Prices, to

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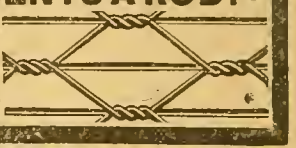

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—OF BEESWAX—

Is our present stock for next year's sales of Foundation. But still **We Want More Beeswax** and pay a good price.

Don't Delay Ordering Your FOUNDATION. You will pay more by and by than you would now. Remember that we make the BEST, and everybody acknowledges this.

Now is the time to read the work of the **Late Father Langstroth—**

Langstroth on the Honey-Bee, Revised.

☞ Send us your address for Catalogue of Bee-Supplies, etc.

CHAS. DADANT & SON,
Mention the American Bee Journal. **HAMILTON, Hancock Co., ILL.**

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56 5th Ave., CHICAGO, ILL.

GEO. W. YORK, Manager. **Send for Free Catalog.**

Appreciating the value of Chicago as a distributing point, and having the opportunity presented to us we have bought out the good-will and stock of bee-keepers' supplies of Thos. G. Newman, who has conducted a successful business there for many years. The following notice explains further:

To whom it may concern:—

I have this day sold to the A. I. Root Co., of Medina, Ohio, my business in Chicago, as "Dealer in Bee-keepers' supplies," together with the good-will of the same; and while thanking my many friends and customers during the past 20 years for their generous patronage, I would bespeak a continuance of the same for my successors, who are well-known manufacturers and dealers in apiarian supplies, and can fill all orders, whether large or small, with promptness and accuracy. THOS. G. NEWMAN.

Chicago, Ill., Sept. 16, 1895.

We have secured the services of **MR. GEO. W. YORK** as manager, who needs no introduction to most of our patrons. Besides his sterling business qualities and promptness, he has had long experience and drill in the supply business under T. G. Newman & Son, before he purchased the **AMERICAN BEE JOURNAL,** of which he is still editor and proprietor.

A full assortment of

ROOT'S BEE-KEEPERS' SUPPLIES

will be constantly on hand, for sale at catalog prices, and prompt service may be had by addressing as above.

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AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS

35th Year. CHICAGO, ILL., NOV. 21, 1895. No. 4

Contributed Articles.

On Important Apiarian Subjects.

The "North Star" House-Apiary.

BY "MORTON'S BROTHER-IN-LAW."

It was a warm, lazy day in September that we got the honey all packed for market, and Mr. Morton was taking a rest and what comfort he could out of Prohibition politics from The Voice, while I was going through the "Old Reliable" for bee-knowledge, when I ran up against this from Editor York's quill: "What new kinks have you learned during the past year? Suppose you tell all about them."

"See here, Morton," says I; "what's the matter with sending a photograph and description of the 'North Star?' There are two kinks in that, anyway—one on each side. Even *you* are getting to admit that you rather like it, and hint at throwing out your chaff hives in the south yard and building one there."

"Well," said he, "why don't you write it up and send it yourself?" And he dived into that old paper again.

Now, Morton is as conservative as E. T. Abbott—and married to his supplies and system of management; will answer "I don't know" as often as Dr. Miller, but when I get all mixed up over the contrary statements in the bee-papers, I always ask him, and *he knows*.

The "North Star" is the name of our new house-apiary, built as an experiment last spring; size, 12x16 feet over all,

The "North Star" House-Apiary—Outside.

containing 32 colonies, and costing $2 per running foot, or $1 per colony. The floors, siding and roof are of matched pine, fastened together at the corners with bolts—to "knock down" and move if desired—10 pieces in all.

For the first 30 inches the building is 9 feet wide; at that height is a shelf for the second row of hives, which extends outward, making the building 18 inches wider from there up to the roof. This arrangement makes it an easy matter to stand on the floor and work the upper tier of hives.

The alighting-boards are 12 inches wide. The windows are covered with wire-cloth, doubled on the upper half for a

The "North Star" House-Apiary—Inside.

bee-escape. The hives are two inches from the wall, to allow for packing. Morton makes the following points in its favor:

Speed and ease in working. Everything is right within reach, and you are in the shade. When you open a hive, the few bees that fly, go to the window-escapes, and that ends the song about your ears. Out-of-doors in the yard are several colonies, and with hat and veil on you go at them; every cross bee in the whole yard is investigating; and the sun burns the back of you neck, and the sweat runs into your eyes. All bee-keepers know how it is. But go into the house-apiary; pull off veil and hat—no bees to bother, and in a few minutes you think that working with bees isn't very bad after all.

In the fall, when an open hive is a direct bid for robbers—there is only *one* hive open at a time inside the house. I was afraid smoke would be disagreeable in the house-apiary, but you don't notice it, as it goes out of the windows and ventilators.

In looking to see if a queen is laying, you have to take a comb out into the sunshine to find eggs, which is objectionable, as far as it goes. If the bees *winter* there as well as in a chaff hive, you can put me down as a house-apiary man after this.

I started last spring with 25 colonies, increased to 47, and have 1,500 sections of mostly buckwheat honey, and 150 pounds of extracted. Dr. Miller, Dr. Brown, and some others, say that one or two colonies are plenty for a beginner. My 25 colonies acted in nearly 25 different ways, and I know 25 times as much as I would with one—and I have a heap more honey for my time.

Groton, N. Y.

Every Present Subscriber of the Bee Journal should be an agent for it, and get all others possible to subscribe for it. See offers on page 754.

Where Should the First Honey be Stored?

BY G. M. DOOLITTLE.

A correspondent writes that a neighbor tells him that bees generally fill the brood-chamber full of honey before they go into the sections to work, and after the brood-chamber is thus filled, then they will go into the sections, if the blossoms yield honey after the hive is filled. From this he reasons that bee-keepers should feed inferior honey or sugar syrup to fill the combs just before the honey harvest, so as to cause the white honey to be stored in the sections, and asks if this is not correct logic. He desires that I shall give my views on the matter in the American Bee Journal.

No, this is not correct logic, and I object to both views, for on them hang all there is against the use of large hives for comb honey, as recommended by our fathers, and even by some of the present day, as opposing the contraction plan which is now in general use among our most prominent apiarists who produce comb honey the most largely for market. No, sir! the bees must *not* fill the brood-chamber first with honey and the sections afterward, if we are to reap the best results from our bees.

At the time the honey-flow commences, the brood-chamber must be filled with brood, with not to exceed five pounds of honey in it, and one pound would be far better than more than five. If it is not thus filled with brood, the wise apiarist will take ont all the combs not thus filled, and store them away where the bees cannot have access to them at this time of the year, for if they once commence to store honey in the combs below, to any considerable extent, thus early in the season, instead of going into the sections they will begin to crowd the queen by filling the empty cells with honey to a greater or less extent, thus removing the sections further and further from the brood in the hive, resulting in little honey in the sections, and the colony in very poor condition for winter, on account of the fewness of bees left, owing to this same crowding out of the queen from the brood-combs.

The work of every bee-keeper should be, during the fore-part of the season, to see that the combs are being rapidly filled with brood, and all of that inferior honey spoken of used up and turned into brood, which is to make the bees for the harvest, till the hive is literally filled with brood; when, if there is a pound of honey coming in after this, it must go into the sections or nowhere.

Many have opposed the Italian bees, because they say they are prone to crowd the queen, rather than enter the sections; but if managed as I propose, they will out-yield the blacks every time in section honey, while at the end of the season they will have honey enough in their brood-combs for winter, when the black bees will be almost in a starving condition. This is not mere theory, but something any one can prove to his or her satisfaction in one year by working a few colonies on each of the two plans.

One of the many things about the Italian bees which pleases me is their desire to store honey in the brood-chamber: for, if rightly managed, they will give a good crop in the sections, and at the same time generally have stores enough, or nearly so, below to winter upon. Just as soon as they begin storing honey in the sections, they begin storing to a limited extent in the brood-chamber, and as the honey season draws toward a close they seem to be on the alert as to their own interest, and the queen ceases to lay as prolifically as at first, which allows of their storing the later honey in the brood-combs for winter stores, while their keeper has plenty of the most salable honey as his share of the season's work. With the Germans, Syrians and Carniolans, the case is different; for they continue to rear brood right along at a rapid rate so long as honey comes in from the field, so that, at the end of the harvest, we have no honey to speak of in the hives, and a host of useless consumers on hand as the result of this out-of-season breeding.

I wish all might fully comprehend that one of the greatest secrets of successful bee-keeping is having the brood-chamber full of brood at the commencement of the white honey harvest. I would certainly have it thus, even if I had to take all the combs out of the hive but four or five, if the queen had no more brood than this at the commencement of the harvest, leaving the bees only this number below until after harvest, when I would at once supersede a queen that would not keep a greater number than that filled with brood three weeks previous to the harvest.

It is one of the great mistakes we often make in allowing poor queens to remain at the head of colonies, such colonies requiring just as much labor as do those which give bees in plenty in time for laboring in the harvest to the best advantage. If lack of brood is caused by weak colonies in the spring (weakness being caused from a hard winter, etc.), then I would unite all colonies which were thus weak, three weeks before the honey harvest, even if I had to divide afterward to give me the required number of colonies, considering that I would be the gainer by so doing.

Unless all colonies are strong in brood and bees when the honey harvest arrives, we are sure of failing to reap the best results in our pursuit. Borodino, N. Y.

Co-Operation Needed in Marketing Honey.

BY W. D. FRENCH.

While bee-keepers of the Pacific Coast are subjected to a combination of blood-sucking thieves, we cannot lose sight of the fact that it affects, to a considerable extent, our Eastern brothers.

We are now confronted all over our broad and happy land by unscrupulous processes by which the toiling masses are fleeced to a finish. All branches of industry—save the agricultural element—have combined, and established a price for their product, regardless of supply and demand. Agriculture, then, being the backbone, muscle and sinew of this broad land, must clothe, feed, and fatten all other industries without a murmur; but we have now arrived at a period where men are not engaged in honorable pursuits, but are ever ready to dictate and to establish prices for the product of that element to which I refer.

These parties are known as middle-men; their sole object being to compel the producer to divide the price of their product, so they (the middle-men) may be enriched. Bee-keepers of Southern California are harrassed in this respect perhaps more than in any other locality. They are forced to give up one-half of their crop, more or less, as greed demands, and when you tell them the price paid is wholly inadequate, and not corresponding with Eastern markets, they simply say: "What are you going to do about it?"

I am sure something can be done; that part of agriculture to which belongs the bee-keeping fraternity can, with a few grains of resolute determination, enlarge the National Bee-Keepers' Union, so as to admit of every person in our land who keeps bees. Let it be the object of this vast association to establish the price of honey in all parts of the country through their manager, and to accomplish all other objects, as it now exists. Let every city and hamlet select a person by vote, or otherwise—one of their number—to handle the product of his community, and to ship to points where demanded.

Warehouses in Chicago, New York, and all cities, could be maintained, and distribution from such places be made. The price of honey according to grade could easily be maintained uniformly throughout the United States, and the honest producer could be liberally rewarded for his labor. The amount of cash to be collected from each bee-keeper, placed at $1.00, would, in all probability, form a sufficient sum to advance to those who would need ready cash.

The solution of this problem can be made easy, and it seems to me, under existing circumstances, when all other elements of production have combined against the agricultural interest of this Nation, it is high time that our bee-keeping friends throughout the United States should awaken to their sense of duty, and inaugurate a system to protect themselves, and their children, from that robber class to which they are now subjected. Foster, Calif.

Robber-Bees—Crimson and Alsike Clover.

BY J. A. GOLDEN.

Never in my recollection have I seen bees in so starved a condition as at the present time (Oct. 14) in this section of southeastern Ohio; seldom have I seen hives boiling over with bees at a time of such a drouth, and never did I see such a multitude of robber-bees storm my apiary as in the past fortnight; at times the air seemed to be alive with bees, determined to steal or die. But I am glad to know they have found their match, as all my colonies are provided with the Golden combination feeder, and are fed so quickly that no difference how many robbers storm the fort, they fail to get a sniff.

This is the way I arranged my hives when the fray began: First, I stopped the entrances to about two inches, and put the Alley trap to each entrance; then I placed a small board against the trap, leaving about two inches of an opening through the zinc. Thus the hive's bees were well fortified, and were victorious in every battle. If ever a robber-bee got inside, she was brought out a corpse. I was sorry to see such a slaughter of the honey-bees, yet it was either starve

or die, trying to procure stores by stealing, as their keepers would not provide for them, which I think is a crime that should not go unpunished. The man that will keep few or many bees, and then stand up and say, without and conscience or soul, "If the bees don't gather enough to live on they may die; I won't buy sugar to feed them"—I say shame to such. I trust that no one who reads this article is guilty of such a crime.

My report this year is that all the honey in unfinished sections went into the brood-combs—not one pound went on our table. Besides, my bees are in prime condition, and every colony is boiling full of bees and "syrup honey," and I predict 1896 a gusher for this southeastern Ohio.

With the assistance of our bee-brethren I hope to succeed in getting our farmers interested in sowing Alsike and crimson clovers, and by that means add to our other sources from which nectar is gathered. Then we will be in touch with the more fortunate bee-keepers who live in the floral country. Already we see our efforts to encourage the growing of both Alsike and crimson proving hopeful for the future. Some of our farmers have sown trial plots since I published the Coverdale letters on Alsike, and T. F. Cooke's letter on crimson clover, in our county papers, and I am glad to know they are the means of breaking the backbone of imaginary excuses in regard to the new grasses, which is rather to doubt their growing in this latitude; but I have sown a plot of ground which fronts on the main street of our village, and the clover is about five or six inches high; the heavy frosts seem only to make the crimson brighter, which compels many passers-by to stop and inquire what causes that clover to look so green. This gives me a good opportunity to explain the new grass, and hand the inquirer a printed letter on its value. I enclose one of the letters.

This is a topic that should be published far and wide, because crimson clover is not only valuable to bee-beepers, but much more valuable to the land—so say those who have thoroughly tested it as a fertilizer. There are hundreds of bee-keepers who do not take the bee-papers, and thus would be induced to widen the field of honey-flora by getting information through other sources.

A letter lies before me as I write, from a bee-keeper of Whittier, Calif., asking me to send him a paper containing the article on Alsike clover, which was requested of me by the Farm, Field and Fireside, and published in the same. Thus if more space were given to the growing of honey-flora, and the size of hives dicussed afterwards, I think it would be wise; and the poor bee-keepers would not have to spend all their surplus to keep the bees through the winter.

Reinersville, Ohio.

[The crimson clover article by Mr. Cooke, mentioned by Mr. Golden, will appear in the Bee Journal later.—EDITOR.]

What Dr. Miller Thinks.

WHY THEY LEFT.—R. J. Walker asks on page 720 why a swarm left a good, clean hive. I'll shut my eyes and guess it was too warm for them.

CAUGHT AT LAST.—I've wondered many a time why in the world such a nice fellow as James A. Green should escape matrimony so long, but I suppose Cupid had his eye on him all the time. (See page 717.) Long life and happiness, Jimmie.

VARIATION IN HONEY-PLANTS.—On page 713, L. B. Smith wonders at the report of J. J. Keith that bees do not work on cottom-bloom at his place in Kentucky while it yields so well at Lometa, Tex. I think we may as well understand that there is a great variation in such things. Possibly there isn't a honey-plant in the world but what at some time or place fails to be profitably visited by the bees. Either it doesn't yield, or else the bees do not visit it because they are more profitably occupied on something else. Time was when I supposed white clover always yielded, but more than once of late years there have been plenty of blossoms but no nectar. In some places golden-rod is valuable, in others not. And so in general, what is good in one place may not be so good in another, and what is good one year may be poor in the same place the next year.

STRAWBERRIES.—Ed Jolley's getting me all mixed up about strawberries. I think he must be referring to the original plants when he says staminate and pistillate can come from any variety. I know very well that a staminate or a pistillate plant may come from any plant producing both stamens and pistils, but please, Bro. Jolley, when we talk about a Crescent plant we don't mean the first Crescent plant that was ever raised from seed, but we mean the Crescent as commonly sent out to-day, and if I understand you correctly, you admit you can't raise staminate plants from the "so-called pistillate varieties." So we're agreed on that.

I thank you for a clear and definite answer to my question—a question that I failed to get Bro. Abbott's answer to. It will save a lot of trouble to strawberry-raisers to know that a crop of berries can be raised from a bed of pistillate plants with no staminate plants anywhere near. The only wonder is that the custom is so universal for intelligent horticulturists to keep up the habit of always planting other kinds with the pistillate varieties, under the impression that it is necessary in order to get a crop.

CHICAGO HONEY PRICES seem to be among the mysterious things. An editorial on page 716 says fancy comb will net little if any more than 10 cents per pound, while on page 721 it is quoted at 15 cents. Surely, freight and commission ought not to take off 5 cents. Another curious thing is the falling in price within the past month.

THE SWARMING HABIT.—Years ago the number of swarms secured in a season was generally considered the measure of success. Gradually that has changed, until now the sight of a swarm issuing—a sight that formerly gladdened the heart of the bee-keeper—makes his heart sink. That doesn't apply to all, but I'm sure it does to a great many, and I think to the majority. Indeed the management, the suppression and the prevention of swarming are to-day burning questions. Some have gone so far as to believe that a strain of bees can be developed that shall have no desire under ordinary circumstances to swarm. Now if they are wrong in believing that it is desirable and possible to succeed in that line, the man that shows them their wrong is doing a public service, and so I give Mr. Lownes credit for his good motives on pages 549 and 712. Just why he should think it necessary to protest that he does it without malice or unkind feelings, I don't know. Why, bless you! Friend Lownes, it's a queer thing if we can't discuss such a matter without getting malicious or cross.

In the first place, please understand that I'm not championing especially the matter of breeding up a race of non-swarming bees. I've never made any attempt in that direction. I don't know whether it can be done or not. But when you said in such positive manner they'd swarm until extinct, and that there was "no possibility under the sun of any success whatever" in breeding out the swarming habit, I thought it was time to call attention to the fact that it was mere assertion without proof. Now that you have retracted that and merely expressed it as a belief, I have no further controversy on that score, and await with interest the arguments you may produce against the possibility and desirability of that which so many consider desirable, and would fain believe possible.

I don't see the contradiction that you seem to see in two of the views I have expressed, namely, that I have less faith than formerly in the prevention of swarming, and also that I don't see anything impossible in having bees not given to swarming at all. As to the first proposition, I don't know, and I'm afraid no one else knows, any sure, practicable way of preventing all swarming in an apiary of say 100 colonies. I think you and I agree so far. I confess to some little hope that a way may be found, but I am not so sanguine about it as I was. As to the second proposition, I believe, and I think you believe, that some bees are less given to swarming than others. It seems possible to select from these the ones least given to swarming. Then from time to time continuing such selections I don't see anything impossible in arriving at the point where the swarming desire should cease. Allow me to say I honestly hold both those views, and I don't see anything contradictory therein. If we should ever reach the point of non-swarming bees, there would be no need to *prevent* swarming, for there would be no desire to swarm. And breeding for a strain of non-swarming bees would hardly be called in the ordinary acceptation *prevention*.

Marengo, Ill., Nov. 9.

The Names and Addresses of all your bee-friends, who are not now taking the Bee Journal, are wanted at this office. Send them in, please, when sample copies will be mailed to them. Then you can secure their subscriptions, and earn some of the premiums offered on page 754. The next few months will be just the time to easily get new subscribers. Try it earnestly, at least.

California as a Bee-Keeping State.

BY J. F. M'INTYRE.

It is not my purpose to boom the bee-business in California in order to help those who are already engaged in it to sell out to good advantage, or to depress the business, buy it up, and have a monopoly; but to give the whole truth as I see it, without regard to what has already been said, or who said it.

I believe that the majority of bee-keepers in Southern California, at least, have their locations fully stocked with bees, and do not care either to buy or sell, or to indnce others to bring more bees into their locations, which would overstock them and surely bring disaster to one or both parties occupying such a field.

It is human nature to take pride in your own State and county, and your own achievements; to tell only the big things done, and to cover up the mean features and your failures; but I will give both sides.

When all the conditions are favorable, California can produce the largest crops of the finest honey in the world, not excepting the famous thyme honey of Hymettus, the clover and basswood honey of the East, or the alfalfa honey of Arizona and Colorado; but during the last 20 years we have had these favorable conditions only on an average once in three years; or, to be more explicit, we have had seven good years, nine in which the bees stored from 10 to 60 pounds to the colony and four years in which the bees had to be fed large quantities of honey to keep them from starving to death.

When only the large yields, (ranging from 150 to 600 pounds per colony) are reported to the tenderfoot, he naturally grows enthusiastic and concludes to endure bee-stings for a few seasons and use the bee-business as a stepping-stone to the banking business; but oh, how different in the morning, when he finds that we have such things as dry years, hot winds that destroy the prospects of a honey crop in three days, when he thought that success was certain, to say nothing of the three bee-diseases—foul brood, dead brood, and bee-paralysis; and when he does secure the long-looked-for crop, and attempts fo dispose of it, he finds the honey-merchant and the railroad company waiting for it with low prices and high freight rates. This applies to the sage-brush bee-keeping in the mountains of Southern California.

There is another section of the State, however, which is rapidly coming to the front as a bee-country, and is not affected by dry years or hot winds. I refer to the alfalfa districts of Kern, Tulare and Kings counties. A neighbor who sold his bees to me and moved to that section to engage in the bee-business there, is well pleased with the change, and reports a profit of $12 per colony for this season. Alfalfa honey is amber-colored, and not so fine flavored as sage honey, but the advantage of making a crop every year more than compensates for the difference in price, which is always higher when the sage honey crop is a failure.

In the northern half of the State few bees are kept, and a small amount of inferior honey is produced; consequently this section is not worth considering by the man or woman who wishes to make a specialty of bee-keeping.

Compared with Eastern bee-keeping, California has some advantages. Our warm winters enable us to winter our bees without having to carry them into the cellar in the fall and out again in the spring; a larger number of colonies may be kept in one apiary, which saves an immense amount of travel from one apiary to another; the average yield per colony, taking a number of years together, is a little higher—the yield of the Sespe apiary, which is about an average location, being 72 pounds per colony per annum for 20 years.

Some of the disadvantages are: lower price for honey, owing to distance from market and high freight rates; dry years, which often kill more bees by starvation than die of cold in the East; most apiaries are located in the mountains. away from society, schools and churches, and are lonesome places to live in, especially for women, and consequently many bee-men are bachelors.

The disadvantages, however, may be somewhat modified. Bees, can, and should, be fed in dry years in time to keep them from starving to death. The price of honey may be helped out somewhat if the bee-keeper keeps well on his feet financially, and is not obliged to sell as soon as his crop is harvested.

The bee-keeper may also marry and live in town six or seven months in the year, and his wife might not object to spending a few "honeymoons" in the mountains occasionally, when a crop is to be harvested.

Although the advantages and disadvantages appear about equally divided, when our fine, healthy climate is thrown into the balance it tips the beam in favor of California, every time.

Another section which is beginning to attract some attention as a honey-field are the bean-fields of Ventura county. The quality of honey produced in this section is good, but the quantity is not very great, and whether or not this field can be worked to the mutual advantage of both bean-grower and bee-keeper, is not yet fully demonstrated. In the East I never saw a bee on a bean-blossom, and do not think they produced any honey, but in Ventura county even the beans are sweet.

IMPORTANCE OF BEES TO FRUIT-GROWING.

As the majority present are more interested in fruit than honey and beans, I will say a few words before closing, on the relations of bees to these crops, and if I am wrong in my convictions and conclusions I trust that Prof. Cook, who has experimented more along this line than any other man in America, will set me right.

I believe that Nature never makes any mistakes; when a tree or plant is in bloom it stands badly in need of help from the insect world, so it puts out a sign to catch the eye, and offers a suitable reward for the service. The beautiful, showy petals are its sign. It wants the pollen or fecundating-dust carried from the stamens to the pistils so it can become fertilized and produce seed. The offered reward for this service is the sweetest gift of Nature—a drop of honey. When the seed is ripe, another appeal is made and reward offered to larger animals, to perform another service. It wants the seed scattered, and the reward ofiered for this service is a beautiful, delicious fruit, placed around the seed in such a way that the fruit will be eaten and the seed thrown away; thus you see the animal and vegetable kingdoms are mutually dependent on each other to perpetuate their existence. I believe that bees are never injurious, generally beneficial, and often indispensable to the blossoms of plants that produce seed.

You may ask the bean-growers, who have bees on their ranches, how their beans set this year, and if I do not miss my guess those having bees are ahead. I admit that bees are sometimes a nuisance to people who are drying fruit, especially such fruits as are dried late in the season, without bleaching. If some cheap plan could be invented to prevent this annoyance, every fruit-grower whose orchard is over two miles from an apiary should keep at least one colony of bees for every ten acres of orchard, to fertilize the blossoms in the spring.

According to my own experience, bees will not eat fruit that has been bleached with sulphur fumes; but it is not desirable to bleach all kinds of fruit, so I think it would pay the fruit-grower to move his bees into his orchard just before it blooms, and move them away again before the fruit ripens, if he has a kind of fruit that would be damaged by the bees while drying, or injnred by bleaching.

At a meeting of the horticultural commissioners of this State, Major Berry, commissioner of Tulare county, told of a case in that county where a man put out a large peach orchard on a wide plain several miles from any bees, and when the orchard was old enough to bear, the trees would bloom profusely but bore so little fruit that the owner contemplated digging them up. When the commissioner visited the orchard the owner asked him what he should do to make his trees bear. He looked the ground over carefully, and, taking in the situation, advised the owner to buy 25 colonies of bees and place them near the orchard. The owner followed his advice, and since that time the orchard has borne full crops of fruit.—Read before the Ventura Farmers' Institute. Sespe, Calif.

The Utah Bee-Keepers' Convention.

BY "REPORTER."

An interesting and profitable session of the Utah Bee-Keepers' Association was held in Salt Lake City, Oct. 5, more than 30 members being present. President Lovesy was in the chair, and John B. Fagg acted as Secretary.

The President said that bee-keepers should unite in supporting and strengthening the Association for self-preservation, if for no other reason. As to markets and transportation, he said if some method could be adopted to collect and dispose of the product of the bee, it would result in much benefit to the bee-industry; then with more favorable freight rates the bee-keepers could dispose of their surplus and prevent, to some extent, the demoralization of the home market.

The foul brood law should be so amended as to protect instead of worry the bee-keepers. In its present form it does not seem to meet the requirements of the inspectors or bee-keepers.

As to bees and fruit-tree spraying, Mr. Lovesy said that was a subject that all bee-keepers and fruit-growers should

be interested in. The very existence of both of those industries depend, to a great extent, upon proper work in spraying, and that at the right time. It has been thoroughly demonstrated during the past two years that no coddling-moth eggs are laid in the blossoms in Utah.

Heber Bennion, of Salt Lake county, said that he would like to see the different societies merge into one instead of being divided into so many. We would be more powerful, and we would be able to obtain better transportation rates and more favorable legislation.

Prof. Mills, of Cache county, spoke in the same strain, and said that we should have a law that would be a benefit alike to the bee-keepers, horticulturists and agriculturists.

Mr. Bullock said the loss of bees was partly due to spraying and partly to starvation. He knew of one person that killed all his bees but 15 colonies by spraying his raspberries while in bloom. He complained bitterly of the insufficiency of the foul brood law, and said that in some parts of Cache county the bees were in danger of extermination by this dread disease. The law should be amended so as to protect the bees.

Mr. R. T. Rhees, of Weber county, concurred in this, and wanted to know the sense of the bee-keepers as to the best hive in general use; he also asked if spraying in the bloom would destroy the pollen and fruit?

Mr. Brown, of Salt Lake county, said that the Ferguson hive for comb honey was the best he had ever seen, being the most simple, the easiest, and the quickest to handle. He thought the bee-keepers should be protected in their rights.

Mr. Folkman, of Plain City, said that the bee-keepers should be protected in this matter, and no spraying should be done while the trees are in bloom.

Mr. Bartlett, of Uintah county, said that part of the trouble was spraying, but there were, sometimes, other causes. He wanted a law for the good of all concerned.

Mr. Terry, of Draper, said that he was interested in both bees and fruit; that no trees should be sprayed while in bloom, as it killed the bees and injured the fruit.

Mr. Lovesy said that some of our bee-keepers had lost considerable by the trees being sprayed while in bloom, and yet those people did not succeed like those who commenced to spray when the moth began working on the fruit.

Mr. Huntington, of Utah county, concurred in these views, and said that spraying in the blossom should be stopped. He wanted to hear the question discussed as to the best hive and the best method of producing and disposing of the honey crop.

Mr. Craner, of Tooele county, followed in the same strain, and said that the bees in Tooele had done well the latter part of the season.

Mr. Clark, of Davis county, said the bees there had done better than usual this year; that he was opposed to joining the bee-keepers with other associations, for the reason that their interests are not identical.

Messrs. Bullock, Fagg and Lovesy were appointed as additioual members on the committee for revising the foul brood law.

At the evening session, after considerable discussion as to the best method of producing and marketing the honey crop, a union of interest was advocated, and a resolution adopted favoring the union of the different societies, provided that some practical method can be adopted. A committee was appointed to present it to the agricultural association.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

A Question on Queen-Rearing.

This is my third season in bee-keeping, and for the first time I have tried my hand at queen-rearing. I would form nuclei, and in 24 hours afterward I gave them a matured queen-cell. Nobody knows with what pleasure and excitement I watched for the advent of the young queens, but those who enjoy the society of their bees as much as I do. But there was this that kept me in constant worry:

After the queens had emerged from the cells, the workers still went on completing their own cells, leaving me in a dilemma as to what to do next. So I took the precaution to cut them all out, lest swarming should be the result. I consulted my "A B C of Bee-Culture," beside the bee-papers, but could find nothing to help me.

Now for the question: After giving a cell to a queenless colony, must I take out any cells that are started, or will the bees tear them down? When will they do it? J. B.

Garvanza, Calif.

ANSWER.—It's a very hard matter to find any set of rules that bees invariably follow, especially as to the matter of queen-rearing. Sometimes they'll tear down cells when you don't expect them to, and sometimes they'll build up cells when you don't expect them to. Generally it is not necessary to cut out the cells that the bees have started themselves, unless indeed the cells are older than the cell you give to them. Sometimes the bees destroy all cells in a nucleus as soon as the young queen emerges, and sometimes they wait until they are mature. It isn't a bad plan to cut out all sealed cells when you give a cell, and it has been said that the cell you give will be more certain to be respected if you put it in the place where you have cut out one of their own cells.

Italianizing and Transferring.

I have 9 colonies of bees, 5 in box-hives and 4 in the movable-frame hives. I want to Italianize. Had I better wait until spring, or can I do it this fall yet? I want to transfer those in the box-hives. I have the dovetail hive. Bees did no good here the past summer. It was too dry. H. T.

Warren, Ind.

ANSWER.—I think after September is over you better not give new queens till spring. The less you meddle with bees the better in November and later.

Rendering Wax with Sulphuric Acid.

1. How much sulphuric acid should I apply to a gallon crock full of old combs to take the wax out of the cocoons?
2. Is it injurious to a tin vessel?
3. How is it applied to old combs? L. H. L.

ANSWERS.—1. I'm not familiar with the matter from experience, but I think about a small tablespoonful to a gallon of water.

2. Yes.

3. I think the wax is stirred in the water and allowed plenty of time to do its work, then the wax is melted and separated as usual. But don't you think you'd like better the plan given by John Clark, on page 568 of this journal, to get the wax out by means of the exhaust steam at some place where steam-power is used? I think you will have nicer wax, for the acid is no improvement to the wax, to say the least.

Size of Hives—Honey Stored by New Swarms—Fastening Brood Foundation.

1. What is the exact size of the Simplicity-Langstroth hive, inside measure? I want to make some of them to put swarms in, in the spring.
2. Ought I to use the 8 or the 10 frame hive?
3. How many pounds of foundation will it take to the hive, using whole sheets?
4. How much honey ought a large swarm of bees store the first year, that issues in April or May?
5. How would you fasten the foundation in the frames?

Tracy City, Tenn. J. A. S.

ANSWERS.—1. 18⅜x12⅛x9½ inches for the 8-frame; 18⅜x14⅛x9½ for the 10-frame.

2. I don't know. Originally 10 frames were used almost altogether, but of late years 8 frames have come largely into use, and within the past year there has been a hot discussion as to the relative merits of the two. Some think 8 frames are enough, and some think 12 frames or more are needed. Certain it is that many good queens can do more than to keep 8 frames supplied with eggs. Some favor 8-frame hives, and allowing two stories for the queen.

3. From 1 to 2 pounds, according as you use light, medium or heavy brood foundation.

4. That depends very largely on the location and the season. Sometimes it will not store enough for its own supplies through the winter, and sometimes it will lay in its own supplies and 100 or 200 pounds for its owner.

5. I have my frames wired, and a saw-kerf cut in the center of the under side of the top-bar (my top-bars are ⅞ thick), the kerf being 5/32 of an inch wide, and ¼ deep, and into this kerf the foundation is put, then fastened there

by dropping a drop of melted beeswax here and there. To drop the wax there I make a wax candle by taking a slender string and pressing around it scraps of foundation, then lighting it and letting it burn till a little pool of melted wax is formed, then this melted wax is allowed to drop where I want it. The wire is imbedded in the foundation by moving it along over a lamp, wire side down, and pressing lightly upon the foundation with the hand. The heat of the lamp makes the wire so hot that it melts its way into the foundation and immediately cools as the wire is moved along, so that when it is done it looks as if the wire had grown in the foundation. The wire can be heated more quickly by electricity by means of a battery.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

Painting Hives—The Proper Method.

Painters usually put on all wood-work exposed to the weather what they call a "priming" coat. Many do this because they are ignorant, or were so taught. Brighter ones know better, and as one of them said to me once, "We do it to make work—we will have to paint it again much sooner."

Good architects step in and prevent this practice, and in the specifications of one of the best architects of Boston, Mr. John A. Fox, this clause will be found: "All outside woodwork, as soon as put up, to be given one heavy coat of raw Calcutta linseed oil, as old as the market affords." In my own experience of many years on Government work, where only the best work was the object, this was the course pursued.

When the dovetailed hives, as usually made, are procured in the flat, all the joints of the dovetails, wherever the cleats go on the bottom-board or cover, the joints of the cover and bottom-board, the whole outside of the hive which bear on other parts (such as the edges of the hive and bearings of the cover), should be given a coat of old raw linseed oil. Do not forget that the underneath part of the bottom-board, being so close to the earth, will become damp and rapidly decay unless it is oiled.

Now, after the oil has dried, put the hive together and give it a heavy coat of paint outside and on all bearings. If the oiling was thoroughly done, and your paint is thick, all joints will be filled, the ends of dovetails and cleats will be thoroughly protected, and the oil from the coat of paint will not soak into the wood, leaving the paint dry and easily rubbed off in a white powder.

The best paint to use is a mixture of white lead and white zinc. Use nothing but raw oil to mix it with. Use no dryers of any kind. The paint, when dry, should have a glossy appearance. Should you put on a "priming" coat, which is simply a very thin paint, the oil from this coat sinking into the wood would leave a great part of the paint dry on the outside, and the next coat of paint cannot properly take hold of the wood, and quickly disappears under the action of the weather.

After the paint is dry, set the hives up with covers on in the sun, some distance from the earth, and let them remain out a week, turning the hives once during the time, in order that all sides may be thoroughly sunned. While still in the sun go over any joint that may have shown signs of opening, with some more of the paint.

In repainting hives, if the paint is not actually off the wood, one good coat of raw oil is quite as good as a coat of paint, and much cheaper.

If, when you received the hives in the flat, you had placed them for a week or so in a hot and dry room, and then oiled, dried and put the hives together in this room without exposure to the open air, the joints of the hives would have gone together more easily, and will remain tighter when exposed to the weather.

E. B. THOMAS.

Lynn, N. C.

The International Bee-Keepers' Congress.

Are you going to the Bee-Keepers' Congress? Remember, it meets in Atlanta, Ga., Dec. 4 and 5. It is not contemplated to interfere with the North American Bee-Keepers' Association. It will simply be a sort of informal meeting of representative bee-keepers from different portions of America, to deliberate and discuss questions that concern the present and future interests of the industry of bee-keeping. Essays will be read by W. S. Hart, O. O. Poppleton, Dr. Peete, G. W. Demaree, Messrs. Dadant, Doolittle, Van Deusen, Mrs. L. Harrison, and others.

The City Hall has been secured for the meeting. Excursion rates to the Exposition can be obtained from all the principal towns and cities. Rooms can be had at the Jackson Hotel (near the depot, and one block from the place of meeting) for 75 cents per day, and 50 cents for meals. The Jackson is a new hotel, and good place. Those who want less rates can find them at the Adkins House, 12 Broad Street.

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Full of Wonders.—"At our very feet lie wonders for whose elucidation a lifetime would be too short."—Mrs. Dana, in "How to Know Wild Flowers."

How true this is, and yet there are people who think that this is a very dull and uninteresting world. All this comes about simply because they "have eyes, but see not."

I remember a remark made in the sitting-room of a hotel by a gentleman last winter while I was at the State University lecturing. As I came into the room after the lecture, he said to a gentleman with whom he was engaged in conversation, "I do not see what there is of interest about bees." The other gentleman, who had used his eyes to better advantage, immediately began to ask me questions about their habits, and as I was in a talking mood, I sat down and for half an hour answered his questions as best I could. At the end of our conversation I walked into another room to get a drink of water, and just as I left the room I heard him say, "Now tell me there is nothing of interest about bees!" and the other answered, "There is more than I thought."

There is more to almost everything than most of us think, I fear, and the man who fails to find anything of interest in the everyday affairs of life misses much of the pleasure of living. I am interested in my bees on account of their money value, but if I had never found anything but money value in them, I am quite sure I should know less about them than I do now—and I know little enough as it is. The man who sets out to master the wonders of the bee hive will not want for a field of investigation, even though he live far beyond the allotted age of the human family. Fiquier quotes Pliny as saying that Aristomachus, of Soles, consecrated 58 years to the observation of the habits of the bee, and that Philiscato, of Trace, passed, for the same motive, all of his life in the forests. Yet many tell us, "There is nothing very interesting in a bee-hive!"

An Outing.—My mileage book shows that I have traveled 1,000 miles less 28, and as I covered more than 200 miles without bringing this into requisition, I passed the 1,000 mile mark. After a pleasant night's ride on that prince of railroads—the Burlington—I made my first call (Oct. 10) on our genial and wide-awake editor, finding him busy, as usual. I want to say in a low tone so he cannot hear it, that if anyone thinks Friend York is not working hard to win success for the American Bee Journal, he makes a serious mistake. There is no question but what he is putting the best he has into this work, and this is all anyone can do. All that seems to be needed is for more people to take the paper, and for all of those who do take it to pay for it promptly.

My next stop was at Watertown, Wis., where I called on the G. B. Lewis Co. I missed my old friend, Mr. Parks, but received a kindly reception from Mr. Lewis, who is now the nominal head of the business. However, the real management is in the hands of a young man who has been well trained for the position he now holds, so that, while those who know him will miss Mr. Parks, there will be no halt in the business progress of the factory. After a pleasant visit with Mrs. Parks and her children, I returned to Chicago and made Mr. York and his most excellent wife a visit. I also had the pleasure of dining with Dr. Peiro, better known as "Emm Dee."

The Doctor is one of those genial, broad-minded men whom it does one good to meet. He is a believer in large hives, that is, if every man may be said to believe in the things which he has. Now the Doctor has a hive which would re-

joice the heart of a Dadant as to its dimensions. It contains 18 frames, and the bees in that hive have not been idle during the summer. The Doctor had taken off the surplus arrangement some 10 days before I visited him. It was left near the hive, and was supposed to contain about 40 pounds of fine honey. As this is the Doctor's first experience with bees, he was very proud of that surplus honey. So, after dinner he said he wanted me to see him take out his sweet accumulation. Generous fellow that he is, he went out and called in one of his neighbors, to whom he wanted to make a present of some of that precious sweet.

All things being ready, we proceeded to the yard, and "Emm Dee," by the most approved method, made a dive for the honey. He soon found empty combs, plenty of them, all of which bore evidence of having been full to the brim of the finest of white honey; but, alas! where was it now? The Doctor's face was a study as he pulled out frame after frame—the sections were in wide-frames—and found every section empty. As he took out the last frame he found five sections which were full of honey. Three of these, in his generosity, he gave to his neighbor, and had two left. About all he said was: "The pesky bees! they have carried it all below." I hefted the hive and contents, and it seemed to me it would weigh about 200 pounds, but yet I had a lingering suspicion that some other bees had carried off that honey; but I would prefer that nothing be said to the Doctor about this. Previous to that, the Doctor had taken off some 30 pounds of beautiful comb honey.

My next halt was at Keokuk, Iowa, where I was met at the train by that practical, far-seeing, aged apiarist, Chas. Dadant, of Hamilton, Ill. If anyone wants to know the breadth of French hospitality, let him spend a night with the Dadants. Their hospitality is like their foundation—the best made.

On my way home I stopped at Palmyra, Mo., and by request of Secretary Rippey, of the State board of Agriculture, spoke at a meeting of the Farmer's Institutes there and at Shelbyville.

This seems like a good deal to cover in about a week, and is almost like a dream, now I am safe at home, but modern invention has almost eliminated space, and 1000 miles is now no more than 50 a few years ago.

Canadian Beedom.

Clipping Queens' Wings.

A writer in this department of the American Bee Journal, who wrote on page 686, is opposed to the clipping of queens, and some of his reasons for not clipping are curious enough. In his reply to Dr. Miller he appears to get beyond his depth, and his philosophy is badly mixed. He says: "Disuse brings deterioration, and it has only to be continued long enough to result in extirpation." That is true—quite true.

Again: "When there is no longer any call for wings, Nature will cease to produce them." That, too, is true—very true; but it is dangerous ground for him to tread, as we shall see presently. The doctrine, so far, is sound and scientific. It is *evolution*, which is now as well established as the "law of gravitation." But then, *per contra*, he goes on to say: "I think the infinitely wise Creator knew what organs and functions it was best to give a queen-bee, and that it is rather presumptuous for man to say, in effect, this little creature would be improved by being deprived of her wings, or, at any rate, of the power to use them." Now, apart from the utter and irreconcilable conflict between the two theories or philosophies let us apply the *reductio ad absurdum* to the argument, and see where it will land its author.

A few months ago I had my horned stock *dehorned*; that is, I had the horns, big and little, of young and old, taken off close to the head. But I ought not to have done this, for did not an "infinitely wise Creator" know best what organs and implements the stock needed? The agriculturist and stock-raiser, however, do know that the horns are better off, commercially speaking; and also humanely speaking, for the stock inflict ten times as much pain on each other, and even on humans, with their horns on, than they suffer momentarily in having them taken off.

Again, we farmers are in the habit of using the knife on young male colts, calves, pigs, and lambs, but this is all wrong, too, for are we not mutilating these animals, and depriving them of organs given them by an "infinitely wise Creator?"

Furthermore, an "infinitely wise Creator" knew what kind of stock (the "scrub") was best for man, and what kind of apple (the "crab") was best for him, and hence we ought to have continued to milk the one and eat the other, and be content, without grumbling or making any wry faces. But the wicked wretch (man) has not done so. He has been trying to improve upon Nature, or the gods; and out of the "scrub," in "a state of Nature," he has, by crossing, and intercrossing, and "breeding up," evolved the splendid Durham, and Holstein, and Jersey, to give him beef, and butter, and cheese; and the Southdown, and Merino, and Cotswold, to give him mutton, and bedding, and clothes. He is a great sinner to do all this, and ought to be visited with suitable punishment. Nevertheless, I fear we shall have to take our chances and continue to use the scissors on the queen-bee, the knife on the animals, and the brains in our heads on the development and improvement of our stock. So much for the *reductio*, and where it lands our good friend of "Beedom!"

The fine point is this: He is trying to "serve two *masters*" in his anti-clipping argument. He is astride two opposing philosophies—which are utterly irreconcilable. These two philosophies are *evolution* and *special creation*. He may take either one, and I shall not complain, but in trying to ride both horns, he must have a fall. If he can prove by evolution that queens ought not to be clipped, I am all attention; and if he can prove by the other theory that they ought not to be clipped, some of his readers may stop clipping, but this deponent will not be one of them. ALLEN PRINGLE.

Selby, Ont.

Bee-Hives for Farmers—Needs Verification.

In my gleanings outside the bee-papers, I have come across the following paragraph in the Country Gentleman of Oct. 31. It appears to be editorial, from the pen of the "bee-master," whoever he may be, that runs the apiary department of the journal named:

"BEE-HIVES FOR FARMERS.—It is a little singular that the late L. L. Langstroth, inventor of the movable-comb bee-hive, should advise farmers not to use it. Several times, however, he has done so. In an article written in 1888, he said he believed that to the mass of farmers who have tried them, these hives have been an injury rather than a benefit. In those parts of the country where they have been most largely introduced, the number of farmers who keep bees has most largely decreased. Most farmers would have better success with bees if they used only the old straw or box hives. Bee-keeping with the movable-frame hives is an *art* which few care to learn; the straw hive is a simple tool which any one can use. Before the bee-moth became prevalent, nearly every farmer kept bees in this simple way. The introduction of the Italian bee has done away with this trouble. With the old-fashioned hives, women and children can do most of the work, and bee-keeping, like poultry-raising, can be their special province and profit. Aside from learning to hive new swarms, little knowledge is needed. This method would not only increase the number of bees kept, but even the use of the movable-frame hives, as bright boys and girls become interested in bee-culture and desirous of pursuing it in the most skilled manner."

I have been a pretty close reader of the bee-journals for many years, and think I am well up in Mr. Langstroth's writings on the subject of bee-keeping, but I cannot call to mind any article of his advising "the mass of farmers" not to use the movable-frame he had invented. It would be very queer, indeed, for an inventor who had made a discovery of great value to the public, to advise that public not to use his invention. The reason given in the above paragraph for this queer advice is not at all a cogent one. The straw hive is not a simple tool which any one can use. The entire paragraph is very misleading. We are told that aside from learning to hive new swarms, little knowledge is needed. It is no trick to hive a swarm of bees. Mr. Langstroth was not the man to encourage ignorance in bee-keepers, or to make it easy for mere smatterers to go into the business. It is the curse of farming in all its departments that so many go into it ignorant of its first principles, and yet expecting to make a success of it.

The Alsike Clover Leaflet consists of 2 pages, with illustrations, showing the value of Alsike clover, and telling how to grow it. This Leaflet is just the thing to hand to every farmer in your neighborhood. Send to the Bee Journal office for a quantity of them, and see that they are distributed where they will do the most good. Prices, postpaid, are as follows: 50 for 25 cents; 100 for 40 cents; or 200 for 70 cents.

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George W. York, - - Editor.

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Editorial Budget.

I am Indebted to Editor Leahy, of the Progressive Bee-Keeper, for some very kind things said in the November number of his paper. I wish to thank him for the same.

Mr. John Huckle, of England, passed away Oct. 31. He was the Secretary of the British Bee-Keepers' Association, and for many years was connected with the business department of the British Bee Journal.

Quite a Full Report of the proceedings of the Totronto convention is appearing in the Canadian Bee Journal. Editor Holtermann engaged a shorthand reporter to "take down" the report for his paper.

Mrs. S. E. Sherman, of Salado, Tex.—one of the best known Southern bee-keepers—has sent me a nice photograph of her cozy little home, where she has lived for 20 years, and has kept bees for 15 years of the time. Mrs. Sherman expects soon to make her home with her son, who is a physician at Dallas, Tex.

Please Mention the American Bee Journal whenever you write to any one who advertises in this paper. If it is in response to a notice of any kind, please don't forget to say you "saw it in the American Bee Journal. This may seem a very small thing for me to speak about, and yet it means a good deal, both to the advertisers, and to the publishers of the Bee Journal. It will aid the former in deciding where it pays them to place their advertisements, and it will help the publishers to secure renewal orders for advertising.

I might say right here, that if it were not for the advertising patronage the American Bee Journal receives, it couldn't possibly be furnished to subscribers for anywhere near as low a price as $1.00 a year. So you see its readers all receive much benefit on account of the advertising.

Will you not kindly remember, then, when responding to advertisements, to mention that you "saw it in the American Bee Journal?"

Some Convention Discussions, Editor Holtermann thinks, would be greatly improved in tone if *all* that is said by everybody taking part in the discussion were published. He thinks that some who are in the habit of permitting their ill-temper to get the best of them during discussions would be a trifle more careful, did they know that *every word* they uttered would be printed. I, too, believe it would have the desired effect, but just think how useless it would be to print such things! Of course, there ought not to be "such things" occurring in any discussion, but all who attend conventions are not angels. They (the angels) probably stay at home, or at least some of them do.

Yes, so far as I'm concerned, I am quite willing that all I ever said at any convention shall be printed.

But in order to make some discussions plain, you'd have to show a few snap-shot illustrations in connection with the words uttered. I doubt whether that would pay—unless you could compel the most belligerent disputant to pay a good, big price for taking his picture!

I think a much better way would be for the President, or chairman, to stop all useless and discourteous discussion before it begins.

Irresponsible Advertisers.—There are many such in the world. But there would be fewer of them if every periodical would refuse to publish the advertisements of those whose object is to deceive and swindle. Now, the Bee Journal doesn't wish to give any unreliable firm a chance to take advantage of bee-keepers. In fact, if I know it, there is not enough money in the world for such to buy space in the advertising columns of the Bee Journal. But I don't know everything, and so sometimes I may be deceived by the representations of some would-be advertisers. If I am, and any bee-keepers have good cause, and will report any really crooked dealings by any of those advertising in the Bee Journal at any time, I will consider it a great favor.

Of course, I know, and you know, that it is utterly impossible for any one doing business, to give entire satisfaction to everybody. The best of us have been misjudged, and then there are customers that would "kick" if they got the whole earth, with a good slice of Heaven "to boot."

But what I want to know is, whether any Bee Journal advertiser does not do as he agrees, after considering the attending circumstances. I'm "dead set" against frauds, and am ready to do my share in giving them a good, big free advertisement when I once *know* that they deserve it.

Some Personal Recollections of the Rev. L. L. Langstroth were written by Mr. A. I. Root, and published in Gleanings for Oct. 15. As all readers of the American Bee Journal will be interested in reading them, I take much pleasure in reproducing them here:

In the Introduction to our "A B C" book you will find some mention of the incidents of my first acquaintance with the honey-bee. During the whole of my busy life, perhaps no other hobby has been pursued with the zeal and keen enjoyment that my acquaintance with the honey-bees has. It seemed for a time as if a new world were opening before me. After I had questioned again and again everybody who kept bees, or knew anything about them in our neighborhood, I began impatiently ransacking books and periodicals. The more I found, the more I thirsted for deeper knowledge. I took a trip to Cleveland, principally to overhaul the book-stores for works on bees; but I did not dare to tell even the members of my own family that I was taking such a trip by stage-coach (for it was away back in the days of stage-coaches, before our railway was built), just to satisfy my thirst and curiosity in this direction. I remember well how the book-keeper pulled down his volumes one after another, rapped the dust off, and began extolling their special merits. It did not take me many minutes to decide that Langstroth's book was *the* book. I was obliged to stay over night at the hotel, for the stage made only one trip daily. I read and read, away into the night; and it was during that night I commenced my acquaintance with the Rev. L. L. Langstroth. He told me just what I wanted to know. My craze was not (certainly not at that time) to make money, but rather to know more about God's wonderful gifts—these strange and *curiously* wonderful gifts which he has provided for the children of men. I did not look at it then just as I do now; that is, I am sorry that, in those earlier days, I did not recognize the Almighty as a loving father. But Langstroth's book helped me a great deal, right

in the line where I sorely needed help. His wonderfully genial, friendly, and sociable way of telling things enlisted my sympathies at once.

I told you I was not studying then for the *money* there was in it. Langstroth never wrote about bees, or did anything else, because of the *money* there was in it. Through all his busy life, he, at least at times, seemed strangely oblivious of the *financial* part. More of this anon.

After I arrived home it did not take me long to find out whether Langstroth was still living. I made the acquaintance, by letter, of Samuel Wagner; got hold of Vol. I of the American Bee Journal. By the way, I wonder whether there is anybody living now who will enjoy reading the first edition of Langstroth and the first volume of the American Bee Journal as I enjoyed it then. Why, the very thought of those old days of enthusiasm makes the blood even now tingle to my fingers' ends.

As soon as I found that Mr. Langstroth was then living at Oxford, Butler Co., Ohio, I commenced correspondence. Then I wanted the best queen-bee to start with that the world afforded. It was pretty well along in the fall, but I could not wait until spring, as some of my friends advised me to do. I soon learned to look up to friend Langstroth with such confidence and respect that I greedily read again and again every word I could find from his pen—even his advertisements and circular in regard to Italian bees. When the book was read through once I read it again. Then I read certain chapters over and over; and when summer time came again, and I had little miniature hives or nuclei under almost every fruit-tree in our spacious dooryard, each little hive containing a daughter of that $20 queen, *then* I read Langstroth's book with still *more* avidity and eagerness, finding new truths and suggestions in it each time.

I think I met him first and heard him talk at a convention in Cincinnati. He was a wonderful talker as well as a writer—one of the most genial, good-natured, benevolent men the world has ever produced. He was a poet, a sage, a philosopher, and a humanitarian, all in one, and, best of all, a most devoted and humble follower of the Lord Jesus Christ. His fund of anecdotes and pleasant memories and incidents was beyond that of any other man I ever met; and his rare education and scholarly accomplishments but added to it all. No one I ever saw could tell a story as he would tell it. A vein of humor and good-natured pleasantry seemed to run through it all. I think he enjoyed telling stories—especially stories with good morals; and they all *had* to have a good moral or they could not come from L. L. Langstroth. Not only the play of his beuevolent face, and the twinkle of his eye, but the motion of his hands as he gave emphasis to the different points in his narration, showed how thoroughly he entered into his topic.

It was my good fortune to listen to him one or more times from the pulpit. He preached to us once here in Medina. The church was full, but I hardly believe any one else in that large audience enjoyed his talk as I did. They did not *know* him as I did.

You must not think from what I have said that our good friend always agreed with every one else. He had opinions of his own, and he could be stubborn and almost contrary when he got "hot" in a discussion. But the gentle spirit was back of it all. I remember once of being out in the apiary, explaining to him some wonderful improvement I had just been working out. He, however, did not see it as I did, and stoutly maintained that the old way—his way, in fact—was better. All at once I stopped and concluded we had better give up the subject. Pretty soon he laid his hand on my arm, and said:

"Friend Root, will you not forgive? I was rude and uncourteous. You have practiced this thing, and are succeeding. Very likely you are right and I am wrong."

Now, friends, how many times in this world of ours do you meet with a man with a spirit like that? Once or twice I have knelt with him in prayer. Sometimes we have prayed together in regard to differences among bee-keepers; and I have always been struck with his remarkable gift in prayer. It seemed as though we were pleading with some dear friend, when he addressed his Maker.

His last public talk to bee-keepers, if I am correct, was the one given at Toronto: and I felt anxious at the time that some shorthand reporter might be at hand who could give us all his words, and even his little stories, just as he gave them to us then. Perhaps others did not enjoy this talk as I did, because they did not know him as I did. Why, that history of long ago, telling of the trouble, blunders, and mistakes in introducing the Italian bees from Italy to America, should be handed down to coming generations. It should be embodied in some of the standard works on bees, in order to secure its preservation.

Langstroth and Quinby—those two old pioneers—have now both passed away, but "their works *do* live after them," and shall live for a thousand years or more. I feel anxious that the first edition of both Langstroth and Quinby should be preserved. There is something to me more interesting in their first efforts—Quinby's book, for instance, telling how to keep bees with a box-hive, and Langstroth telling his first experiments with the movable-frame hive. Those early editions should be preserved; also the first volumes of the American Bee Journal, containing the writings of these two great benefactors of the world.

When quite a child I was greatly interested in reading the life of Benjamin Franklin. When I first became acquainted with Langstroth I could not resist the suggestion that he was much like Franklin. The maxims of Poor Richard suggest the thought. Mr. Langstroth was remarkably well read in ancient literature. He was familiar with the writings of great men in all ages. It rejoices my heart now to know that he was even present with his daughter at the one that occurred so short a time before his death. He never seemed to have a faculty for accumulating property; but what is *millions* of money compared to the grateful remembrance with which Langstroth's name will be spoken in every civilized land on the face of the earth? A. I. ROOT.

"In the Province of Silesia, 260,000 colonies of bees are kept, representing a capital of more than $1,000,000. These, even in the most unfavorable years, yield a profit of 10 per cent.; and in propitious seasons, such as the year 1846 was, the yield was fully 100 per cent., or more than $1,000,000. It is well ascertained that the whortleberry and buckwheat blossoms are much richer in saccharine juices on the poor soil of Silesia than in more fertile districts."—Vol. 1, No. 2, American Bee Journal for 1861.

A Correction.—On page 687, in the item on "Bees and Cotton-Bloom Again," where it says cotton-bloom yields from 6 to 10 p.m., please read, from 6 to 10 *a.m.*

Earn Your Own Subscription.—Any present subscriber can earn his or her own subscription to the American Bee Journal for one year by sending *three new subscribers*, with $3.00. A copy of "Bees and Honey" will also be mailed to each new subscriber, and the Bee Journal will be sent to the new readers from the time the order is received up to the end of 1896. This is an easy way to earn your own subscription and at the same time help to circulate the Bee Journal. Remember, getting 3 new subscribers pays for your own subscription for 1 year! Of course, no other premium will be sent in addition. This is a straight offer by itself.

Liberal Book Premiums are offered on page 754, for the work of getting new subscribers to the Bee Journal. It is a fine chance to get a complete apicultural library. Think of it—40 cents' worth of books given to the one sending a new subscriber! Remember, please, that *only* present subscribers to the Bee Journal can take advantage of that offer. The publishers of the Bee Journal believe in making it an object for the old subscribers to push for new readers among their neighbors and friends, hence the generous premium offers to them. It is hoped that all may begin *now* to work. Sample copies of the Bee Journal free.

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

☞ See "Bee-Keeper's Guide" offer on page 751.

Among the Bee-Papers

Gleaned by Dr. Miller.

LYSOL A SUCCESS FOR FOUL BROOD.

Well, we have no foul brood now. One colony has some dead brood, killed by feeding lysol. I used a hive that had foul brood last season, and fed two feeds too close together, so that the young larvæ got two doses, and that will fix them sure. Lysol will cure foul brood here in Michigan. I have treated 7 colonies for another party, and they are now all healthy; but it may return next season. More lysol will do the business, so will McEvoy's way of doing. Can't scare me out of another year's growth with it again.—CHAS. BIERY, in Gleanings.

SOME STRAY STRAWS FROM GLEANINGS.

In the discussion as to five-banders, the fact is not as generally recognized as it should be that there are five-banders and five-banders. It seems that some of them are Italians, others not. Why should they be alike?

Langstroth and Quinby are both gone; but the Germans still have their "Langstroth," the revered Dzierzon. Only three of the 40 great wander-conventions has he missed since their commencement in 1850.

You can guess pretty closely at the amount of stores in a hive by looking at the tops of the combs; but you can come closer to it by weighing each hive, and you can do it in less time. Make abundant allowance in every hive for weight of pollen and extra weight of old combs.

More and more I come to the view that I don't want to see sweet clover grow six feet high. I think more honey in the long run will be bad from it if it is kept cut down or eaten down so that it never gets more than two or three feet high. [I think you are right—at least, the clover that stock browse down seems to be more thickly covered with bees.—ED.]

AMALGAMATION.

There is more or less agitation going on in the several bee-papers in regard to the uniting of the Bee-Keepers' Union and the North American Bee-Keepers' Association. We do not see any objection to this being done, as the latter association is of no use to any one at present, and it certainly would not detract from the usefulness of the Union, while at the same time making it numerically stronger, and perhaps would cause more interest to be taken in it than at present.—American Bee-Keeper.

HONEY VS. SUGAR.

A. I. Root interviewed Dr. Kellogg, of the Battle Creek Sanitarium, and the following especially interests bee-keepers:

"The last question of the evening was in regard to the use of honey for food. Our readers will recall some of the severe strictures from Dr. Kellogg, that went the rounds of the papers some years ago in regard to the matter of honey as food. Well, the teacher frankly admitted he had changed his mind in regard to honey. Some recent experiments with diabetic patients have revealed the fact that, where a liver is so much diseased that it refuses to eliminate pure cane-sugar, it will still fulfill its office on honey—that is, where *sugar* would be almost fatal to a diabetic patient, he can eat good honey almost with impunity. You may recall the fact that I have written of a similar experience of my own, in regard to the use of honey. Will our readers having impaired digestion please try dispensing with sugar, and use good honey instead? If your honey is not first-class, make it so by *sterilizing*, or, in other words, heating, not enough to injure it, but so as to kill even imperceptible fermentation, and make it wholesome."—Gleanings.

YE OLDEN TIME.

The older members of the fraternity will especially enjoy the following in Review, from B. Taylor:

"About the year 1840, my brother bought and brought to our home a swarm of bees. It was in a circular straw hive, made by weaving together a rope of straw with splinters of tough wood. The management of this hive was the first lessons I remember in practical bee-keeping, and I now vividly recollect the interest I took in the first effort to get some table honey from that hive. A frosty morning was chosen for the work (so the bees would be too cold to sting), a bundle of rags set on fire, and after the bees were smoked nearly to death by first one and then another of our numerous family taking turns in blowing, with their mouths, smoke into the hive-entrance, we proceeded to rob the hive. It was turned upside down, and while one person blowed smoke among the half-dead bees another pulled the brood-combs from their fastening. Each comb would, if properly cut loose at the top, have a strip of sealed honey along one edge which would be an equal mixture of bee-bread and honey. The balance of the comb would be a mixture of sealed and unsealed brood and unsealed honey. The strips of sealed honey were cut from each comb and stored in stone crocks as 'gilt-edge' goods. The remainder was put in a cloth bag and hung near the chimney fire to drain. We pronounced the gilt-edged goods best, but the strained 'real good.' I believe much of the prejudice against extracted honey has its root in the crude methods of those long-ago years.

ALFALFA—HOW IT RESEMBLES SWEET CLOVER.

Dr. Miller's Straw on alfalfa is about right if he is comparing alfalfa with *young* sweet clover. The only difference at that stage is, that sweet clover is of a lighter shade of green; has slightly larger leaves and stems, and a more robust appearance generally. But the mature plants are very different. Sweet clover is then twice as high, branches out much more, has a much greater prominence of stems, and is considerably longer, thinner, and has more pointed blossoms, than alfalfa. Aside from the blossoms, and except when it gets quite old, alfalfa presents the general appearance of young sweet clover.—F. L. THOMPSON, in Gleanings.

FIVE OR THREE BANDS.

Chas. H. Thies says in American Bee-Keeper: "I have been breeding the five-banded bees and queens for a number of years, and have had some experience with them. To sum up, if I were asked which I considered the best bee, I would be compelled to say the three-banded Italians. In looking over the list of queens sent out during 1893, 1894 and 1895, I can plainly see that the five-banded variety is losing ground fast, and my expectations are that in 1896 five-banded bees will be little wanted, and I am now making arrangements to breed mostly from imported stock."

GOOD YIELD AND SATISFIED BEE-KEEPERS.

A dispatch from Winchester says that the apiarists of Riverside county are well satisfied with their season's work, their colonies having yielded an average of from 200 to 300 pounds of honey.

O. E. Harper, who has a ranch in St. John's canyon, near Winchester, has harvested 9½ tons of honey from 74 colonies of bees, being an average of 256 pounds. Besides this, he has now 154 colonies, his apiary having more than doubled during the season. In the spring these bees were worth $3 a colony, or a total of $222. He has, therefore, made $234 as representing the value of the new swarms, and putting the honey at only 4½ cents per pound he will get, besides, $855 for his labor.

The year throughout southern California has been marked by very exceptional circumstances, encouraging to bee-men after the hard luck of last season.—Pacific Rural Press, for Oct. 19, 1895.

WHERE SHALL WE WINTER BEES?

There is probably no better place to winter bees than in a good dry cellar; and if the questioner has such a cellar I would advise him to put his bees in it for wintering. While this is not absolutely necessary for safe wintering, and not as necessary in our more Nothern localities, yet there will be a great saving of honey to the apiarist, as well as better chances of successful wintering, even as far south as all but the most southern tier of States. If the cellar has a variable temperature it will not be as good for the bees as would one in which the temperature could be kept as nearly at 45 as possible; yet if the temperature does not go above 50, nor go lower than 35, it will winter bees much better than to leave them on the summer stand, unprotected. If the cellar is of more variable temperature than this, the bees would be doubtless better off out-of-doors.—DOOLITTLE in Gleanings.

The International Bee-Keepers' Congress.

This gathering meets at Atlanta, Ga., Dec. 4th and 5th. The Exposition at that time will be at its best, and the railroad rates the lowest. It will be a large convention of bee-keepers. Make your arrangements to go. See page 746.

General Items.

Bees in Good Condition.

I had 4 colonies of bees last spring, and now have 9, with 75 pounds of surplus honey. The bees are in good condition, and will be wintered in the cellar. We have had four poor years for honey.

J. V. B. HERRICK.

Champlin, Minn., Nov. 6.

Succeeding with Bees.

Bees that were rightly managed did very well this year, while those that were not cared for swarmed themselves to death. My bees gathered from 50 to 130 pounds of honey per colony, while my neighbor's 6 or 7 colonies did not store 75 pounds, and we live only a mile apart. Such people cannot succeed with bees; they never work with them, and, worst of all, how can they expect to get along without a bee-paper? They save $1.00 by not getting a paper, and then lose $5.00 because they did not take one. FRANK N. BLANK.

Prairie Home, Mo., Nov. 1.

Keeping Empty Combs—No Swarms.

I see a great deal in the Bee Journal about keeping empty combs. I have kept mine in the old hives. I closed the entrance tight, and examined them once in two weeks. Occasionally I have found a worm or two, which I take out with a knife. My combs are nearly all as good as they were last spring.

We had no swarms here this season, and very little honey. There is a bee-keeper here who has 300 colonies, and he did not have a single swarm. M. DAVIS.

South Avon, N. Y., Nov. 6.

Bees Did Fairly Well.

I got 1,550 pounds of honey from 43 colonies, half comb and half extracted. We had some honey-dew here. I could find it only on 10 trees, and there were several trees within a few rods from those 10 that had no dew on at all. I watched them daily, but could see but few bees on them. I think there was but one colony that worked on the dew, and they were in a store-box that would hold 1½ bushels. They were out earlier and later than the rest, and soon filled the box; then I put them into a hive, and they soon filled that.

C. C. ZINN.

New Windsor, Colo., Oct. 28.

Good Report from California.

My report for the year of 1895, is as follow:

Total number of colonies, spring count, 35, two colonies being without queens in the spring.

Largest yield of honey for one colony, not including the parent colony, 312 pounds; smallest yield for one colony, 56; average yield of honey per colony, in one-pound sections, 203; average yield of extracted, 17 pounds. Total average yield per colony, 220 pounds; total yield of comb honey, 7,106; total yield of extracted honey, 600. Total yield of the apiary, 7,706 pounds. Number pounds of beeswax, 47.

Who can beat the above? F. S. POND.

Riverside, Calif., Oct. 30.

Bee-Keeping in Nova Scotia.

I am more than pleased with the Bee Journal. It is bright, and breezy and businesslike.

I have 5 colonies of bees which I endeavor to maintain in good standing. Not desiring a large apiary, I prevent swarming by cutting the queen-cells off during the swarming season. This method is, I think,

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—OR—

MANUAL OF THE APIARY.

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not up to the best practice, but it generally affords me the object I am after, with an expenditure of little time, and, by the way, I am hoping that they will forget their bad habits in this respect.

This section of country is not blessed with a large variety of honey-plants, and we do not reap large crops of honey, as a rule. The fruit-bloom is generally abundant, next is clover—white and Alsike—then buckwheat, and later we have some golden-rod. This latter is but recently prevailing to any extent here, but seems to be increasing, and I think is an excellent honey-producing plant. We have some native trees that yield honey, also, but with all the above our honey comes very largely from clover, and the sensons are not always favorable to its growth. Last year, and this, also, has been largely failure with us, on account of drouth early in the summer.

The Nova Scotia Bee-Keepers' Association is the name under which our bee-keepers meet annually to discuss matters relating to its welfare. S. BLENKHORN.

Canning, Nova Scotia, Oct. 15.

Increase, But No Honey.

I started the season of 1895 with 2½ colonies (the half was queenless), and 10 pounds of bees, which I bought on single frames, with queens. I now have 20 colonies in very good condition. I made the increase artificially, except two natural swarms. But that is all—no honey for me. The trouble with this section of country is, we have not enough spring or early summer honey-flora to do the bees any good. Fruit-bloom and wild-flowers cause them to begin brood-rearing, and often swarm, and then they have June, July and August to starve. FRED BIESEMEIER.

Sterling, Nebr., Oct. 28.

Growing Alfalfa.

Sow alfalfa broadcast. Prepare the land in just the same way as to sow clover seed. March or April is the best time to sow it. Alfalfa was 5 cents a pound when I left Colorado. Sow it with oats, and it will be all right. JOHN CRAIG.

Gillespie, Ill.

A Remedy for Robbing.

When bees in the same apiary get to robbing each other, fill the smoker with tobacco and give the colonies that are doing the robbing a *thorough* smoking. Smoke them until they are thoroughly drunk. The large stems of the tobacco-plant cut fine with a fodder cutter, or ax, are the best fuel for this business, or for vicious bees, and costs nothing. For ordinary work, corn-cobs cut fine are the best fuel known.

Lockwood, N. Y. J. H. ANDRE.

Poor Season in West Virginia.

This year was the poorest for the production of honey this part of the country has experienced for years. There was very little surplus honey, and the greater portion of bee-keepers realized no surplus, and bees are in poor condition for winter. I secured 442 pounds of fair quality of comb honey, some 200 sections partly filled, and 6 swarms from 26 colonies.

I have adopted the Stephen's steel frame-spacers; they surely are a thing of perfection. I have examined the Hoffman self-spacing frame, and think them very inferior to the Stephen's spacers.

Long, W. Va., Nov. 4. IRA SHOCKEY.

Satisfied that Bees Hear.

I have often read that bees do not hear. Now I am satisfied in my own mind that they do hear. This morning when I got up I went down into the store and "swept out," as I do usually every morning. The first thing after I had swept out, I saw a large rat in front of the store, picking up

ATTENTION, BEE-KEEPERS!

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Bee-Keeper's Guide—see page 751.

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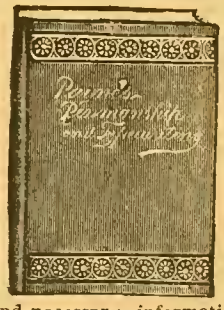

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the crumbs of cheese that I had swept out. I went back upstairs, and got the gun to shoot the rat, but it had gone back under the store, so I went to the back part of the store and shot at it. I was about 30 or 40 feet from 4 colonies of my bees when I shot. In about one minute I heard the bees roaring as loud as I ever heard bees roar. Now I am satisfied that it was not the jar that made them roar, as my bee-shop was between me and the bees. WM. CRAIG.

Luce, Mich., Oct. 31.

Prickly Pear.

Will some one who knows, please tell in the Bee Journal, whether the prickly pear, as it is called, yields nectar in paying quantities? If so, what flavor and color has it? J. M. W.

Hoping for a Better Season.

As our honey harvest is over, I will send in my report, which is a very poor one. We have not had one pound of surplus honey this year, and worse still, will have to feed for winter stores. We, like all bee-keepers, hope for a better season next, and stick to our bees if we do have to feed. Perhaps *our* courage is strengthened somewhat as we had a new bee-keeper to arrive at our home Oct. 27, 1895, and we thought we could do no better than name him for two of our favorite bee-friends, so his name is Howard York Cowell. LEONARD COWELL.

Ft. Worth, Tex., Nov. 9.

[Many thanks, Mr. Cowell, for the honor conferred. I trust "Howard York" may never regret having to carry around the short middle third of his name.—EDITOR.]

Convention Notices.

WISCONSIN.—The annual meeting of the Wisconsin State Bee-Keepers' Association will be held Thursday and Friday, Feb. 6 and 7, 1895, in the capitol building at Madison. The program will appear in due time.

Platteville, Wis. N. E. FRANCE, Sec.

IOWA.—The Central Iowa Bee-Keepers' Association will hold its third annual meeting at Oskaloosa, Dec. 26 and 27, 1895. This will be the largest convention held in the State this year; many of the best bee-keepers of the State are on the program and a good time is expected. All are invited. Other bee-papers please copy. W. EMMET BRYAN, Sec.

New Sharon, Iowa.

CANADA.—The annual meeting of the Prescott Bee-Keepers' Association will be held in the Town Hall at Plantagenet, Ont., on Monday, Dec. 2, at 1 p.m. All bee-keepers and those interested in the production and consumption of honey are hereby cordially invited to attend.

The Russell County Bee-Keepers' Association will hold their annual meeting in the Town Hall at Rockland, Ont., the following day, at the same hour. Open to all.

Chard, Ont. W. J. BROWN, Acting Sec.

The Special Meeting of the Illinois State Bee-Keepers' Association will be held in Chicago, at the New Briggs House, northeast corner of Randolph St. and Fifth Ave., on Thursday and Friday, Jan. 9 and 10, 1896—the week of the National Cycle Show—when excursion rates will be given. Notice will be published later as to whether these rates will be on the certificate plan or otherwise. Chicago hotel rates are 75 cents each, per night, two in a room; $1.00 if one in a room. Meals extra—pay for what you order, or go elsewhere for meals, if preferred. JAS. A. STONE, Sec.

Bradfordton, Ill.

MINNESOTA.—The seventh annual meeting of the Minnesota Bee-Keepers' Association will be held at Minneapolis, Thursday and Friday, Dec. 5 and 6, 1895. Every bee-keeper is invited to be present and join the society; it will be the most important meeting ever held. If you have any question you would like to have discussed, send the same to me, and come prepared to help make the meeting interesting and profitable. The State Horticultural Society convenes on Dec. 3, and continues for three days. Every person interested in bees and fruit should attend these meetings. Take receipt from your station agent, that you have bought ticket to the Horticultural meeting, so as to get reduced rates. J. P. WEST, Pres.

Hastings, Minn.

A WOMAN.

A woman has many pleasures and much to be thankful for; but, alas! she also has many pains.

A woman may not be the slave of man, but where her affections are concerned she is devoted to him, and often over-taxes herself thereby.

A woman will often, without knowing it, commit slow suicide for her children. She will think, toil and shorten her life in their behalf. Too often they do not appreciate it.

A woman should not allow her color to fade, her cheeks to become sallow, her strength to be lost. She is designed for attractiveness and happiness.

A woman need not allow any of these things to happen if she will only obey the laws of health and use the best means at her command for preserving it.

A woman needs a friend upon whom she can rely, and there is no friend which so surely aids her when she is in need of aid as that great remedy, Warners' Safe Cure.

A woman who has never learned this great truth or who has failed to avail herself of it, has lost a fine opportunity and is doubtless less strong and attractive to-day than she deserves to be and might be.

A woman who follows the best hints that can be given her, and who takes advantage of the latest discoveries of science for helping her is certain to live longer, appear more attractive, suffer less, and enjoy more happiness than one who neglects her opportunities.

Extracted Honey

✲ FOR SALE.

We have made arrangements whereby we can furnish the Finest **Basswood** or **Alfalfa** Extracted Honey, in 60-pound tin cans, on board cars in Chicago, at these prices: 1 can, in a case, 8½ cents per pound; 2 cans in one case, 8 cents; 4 cans (2 cases) or more, 7½ cents. Cash MUST accompany each order.

☞ A sample of either kind of honey will be mailed to an intending purchaser, for 10 cents, to cover postage, packing, etc. We guarantee purity, and that what we ship will be equal to sample.

Now it seems to us that here is a splendid chance for any bee-keeper to supply his home demand after his own crop is all sold. Or, why not begin now to create a local honey-trade? Order one 60-pound can first, and start out among your neighbors and friends, and see what you can do. You ought to get at least 15 cents per pound in 5-pound lots, or 50 cents for 3 pounds. Some may be able to do even better than that, though we think that enough ought to be sold at these prices to make a fairly paying business out of it. Give it a good trial. Push it. It may grow into a nice winter's work for you.

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List of Honey and Beeswax Dealers

Most of whom Quote in this Journal.

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HILDRETH BROS. & SEGELKEN, 120 & 122 West Broadway.
CHAS. ISRAEL & BROS., 486 Canal St.

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C. C. CLEMONS & CO., 423 Walnut St.

Buffalo, N. Y.

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WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Oct. 16.—We never had as good inquiry for honey as this fall, and never sold as much. We have not received as good prices owing to the amount of California stock unloaded on this market, which was sold at a very low price, both comb and extracted. We quote: No. 1 and fancy, 13@15c.; amber and dark, 8½@11c. Extracted, 5@7c. Beeswax, 28c. J. A. L.

BUFFALO, N. Y., Oct. 14.—Honey is in good demand. We quote: Fancy, mostly 16c.; choice, 14@15c.; buckwheat sells slowly at 10@12c. Extracted very quiet. Will advance liberally upon all choice shipments of honey. Beeswax wanted at 28@30c. B. & CO.

CHICAGO, ILL., Nov. 7.—Comb honey, if fancy in all ways, sells at 15c., but the bulk of sales of white comb that grades No. 1 is sold at 13c. Amber or yellow brings 9@11c.; dark and brown, 8@10c., according to finish and flavor. There are large offerings of extracted at prices ranging from 4½@7c., according to color, body, flavor and package. Beeswax, 28@30c. R. A. B. & CO.

NEW YORK, N. Y., Nov. 8.—Demand for comb honey is very good, particularly fancy white, and is moving out about as fast as it arrives. We quote: Fancy clover, 1-lbs., 15@16c.; white, 13@14c; fair, 11@12c.; buckwheat, 10@10½c. Extracted, buckwheat, 5@5½c, with supply equal to demand; white clover and basswood, 6@7c., with supply short and demand good; Southern, 50@55c. per gallon. Beeswax, 27@29c.; extra fancy, 30@31c. C. I. & B.

KANSAS CITY, MO., Nov. 8.—The demand for comb and extracted honey is fair; receipts fair. We quote: No. 1 white, 1-lbs., 13@14c.; No. 2, 12@13c.; No. 1 amber, 12@13c.; No. 2, 10@11c.; dark, 8@10c. Extracted, white, 6@6½c.; amber, 5@5½c.; Southern, dark, 4@4½c. Beeswax, 22@25c. C. C. C. & CO.

ALBANY, N. Y., Nov. 9.—Our honey market is in good shape, although prices, like on most all products, are not high; but receipts are lighter than last year, and there is a good, steady demand, with a real scarcity of white honey. We quote: White clover, 15@16c.; mixed clover, 12@14c.; dark clover, 9@11c. Extracted, white, 6½@7c.; mixed, 5½@6c.; dark, 5@5½c. H. R. W.

CINCINNATI, O., Nov. 8.—There is a fair demand for honey, with a bountiful supply. Comb honey sells at 12@15c., according to quality, in a jobbing way. Extracted brings 4@7c. on arrival.

Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. M. & S.

NEW YORK, N. Y., Nov. 4.—The demand is good for all grades of comb honey, especially fancy white. We quote: Fancy white, 1-lbs., glassed or in paper boxes, 15c.; fair white, 12@13c.; buckwheat, 10@11c. Unglassed, fancy white, 14c.; fair white, 11@12c.; buckwheat, 9@10c. No 2-pound sections on the market and no demand for any. The demand for extracted honey has been rather limited of late, with plenty of stock arriving. We quote: California, 5½@6c.; white clover or basswood, 6c.; Southern, 45@55c. per gallon.

Beeswax dull at 27@28c. for average quality. H. B. & S.

PHILADELPHIA, PA., Oct. 23.—Honey is selling freely, and good, choice comb sells on arrival. Pure Western extracted white clover sells very quickly and is in big demand. We quote: Fancy white clover, 16c.; choice, 14c., dark, 11c. Extracted, 5½@6½c.; pure white clover, 8@9c. Beeswax will not, in our judgment, advance much more, as it did last year, large quantities having been laid up at low prices. It sells fairly well at 26c. on arrival. W. A. S.

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J. A. Green—Most honey would be ruined by such treatment.

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Mrs. J. N. Heater—I have never tried it, and don't think I ever shall.

Rev. E. T. Abbott—I should prefer honey secured by a different process.

B. Taylor—Honey so separated has a different flavor, and is darkened in color.

Dr. J. P. H. Brown—No objections if the honey is in cappings and small bits of comb.

C. H. Dibbern—I fail to see the object of such an operation, but I see no objection to it.

P. H. Elwood—The heat necessary to make the separation injures the flavor of the honey.

W. G. Larrabee—I never did it in this way, but I don't think there would be any objection.

Mrs. L. Harrison—I have tried many ways of melting comb honey, using the greatest care, and it would always have the taste of wax.

Jas. A. Stone—The only objection I know is that it is too slow, although I do it that way when I only have a little to extract, and need a fire in my honey-house to work by.

R. L. Taylor—I suppose it is meant that the separation is to be effected by heat; in that case there is no possible objection if one does not care for the extra time and fuel required.

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Appreciating the value of Chicago as a distributing point, and having the opportunity presented to us we have bought out the good-will and stock of bee-keepers' supplies of Thos. G. Newman, who has conducted a successful business there for many years. The following notice explains further:

To whom it may concern:—

I have this day sold to the A. I. Root Co., of Medina, Ohio, my business in Chicago, as "Dealer in Bee-keepers' supplies," together with the good-will of the same; and while thanking my many friends and customers during the past 20 years for their generous patronage, I would bespeak a continuance of the same for my successors, who are well-known manufacturers and dealers in apiarian supplies, and can fill all orders, whether large or small, with promptness and accuracy. THOS. G. NEWMAN.

Chicago, Ill., Sept. 16, 1895.

We have secured the services of **MR. GEO. W. YORK** as manager, who needs no introduction to most of our patrons. Besides his sterling business qualities and promptness, he has had long experience and drill in the supply business under T. G. Newman & Son, before he purchased the **AMERICAN BEE JOURNAL,** of which he is still editor and proprietor.

A full assortment of

ROOT'S BEE-KEEPERS' SUPPLIES

will be constantly on hand, for sale at catalog prices, and prompt service may be had by addressing as above.

Mention the American Bee Journal. **The A. I. ROOT CO., Medina, O.**

PUBLISHED EVERY WEEK AT $1.00 PER ANNUM.

ESTABLISHED IN 1861

AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS

35th Year. CHICAGO, ILL., NOV. 28, 1895. No. 48.

Contributed Articles.

On Important Apiarian Subjects.

Report of the Committee on Amalgamation.

We, the Committee appointed at the North American Bee-Keepers' Convention held at Toronto, Ont., on Sept. 6, 1895, on the proposed consolidation of the North American Bee-Keepers' Association and the National Bee-Keepers' Union, report as follows:

The duties and powers of the Committee are clearly defined in the Resolution which authorized the appointment of the Committee, which, after prolonged discussion, was unanimously adopted. This resolution was as follows:

Resolved, That a Committee of seven be appointed to take into consideration the proposed amalgamation of the National Bee-Keepers' Union and the North American Bee-Keepers' Association, and to arrange terms therefor, with full power to perfect the same so far as this Association is concerned; and to report through the bee-periodicals as soon as possible. The present President of this Association to be one of the members of that Committee.

The Committee met and organized, and have unanimously adopted the following address:

To Officers and Members of the National Bee-Keepers' Union, GREETING:

Being co-workers in one common cause—the welfare of the bee-keeping fraternity, and the advancement and defense of the pursuit of apiculture in America—we are authorized by the North American Bee-Keepers' Association to offer you the "hand of fellowship," congratulating you on your efficient organization and successful work during the 10 years of your existence.

As there is no necessity for the existence of two organizations to accomplish the work which can easily be done by one, we propose a consolidation of our two Societies, for the purpose of creating a closer "bond of union" between apiarists, and saving them the extra expense of membership in two bodies in order to gain the benefits and advantages which one can bestow, when united for that purpose.

Ever realizing that "in union there is strength," we offer you any portion of our name you may desire to appropriate.

We offer you our grand history and work accomplished during the past quarter of a century.

We offer you our members, in every State, Province and Territory of North America, and, so far as we can, we promise their co-operation in all measures looking to the advancement of the interests of the pursuit, and a continuance of the glorious record you have made in the 10 years of your successful existence.

All we ask in return is, that you add to your already efficient Organization, similar annual conventions to those we have heretofore been holding, at some convenient time and place, and if possible, that you devise some equitable system of delegation, so as to make such thoroughly representative, competent to act for the entire membership.

We desire that this proposition be submitted to your members, together with such Constitutional provisions as may be necessary to effect the consolidation and provide for annual meetings, so that a full and free vote upon the same may be taken at your next annual election of Officers, and hope that this proposition may be accepted—that being the only necessary step to unite us both into one strong and well-equipped organization. If the consolidation is effected, it would be desirable for it to go into effect Jan. 1, 1896.

THOMAS G. NEWMAN, Chicago, Ill.,
F. A. GEMMILL, Stratford, Ont.,
J. T. CALVERT, Medina, Ohio.,
M. B. HOLMES, Athens, Ont.,
A. B. MASON, Toledo, Ohio.,
EUGENE SECOR, Forest City, Iowa.,
R. F. HOLTERMANN, Brantford, Ont.,
Committee.

[The Constitution of the amalgamated society, as submitted for approval, reads as follows:—EDITOR.]

ARTICLE I.—NAME.

This organization shall be known as the "North American Bee-Keepers' Union," and shall hold meetings annually at such time and place as may be designated by the Board of of Directors, due notice being mailed to all members at least 60 days previously, and published in the bee-periodicals of the United States and Canada.

ARTICLE II.—OBJECT.

Its object shall be to protect the interests of its members, to defend their rights, and to form a bond of union for mutual protection.

ARTICLE III.—OFFICERS.

SECTION 1.—The Officers of this Union shall consist of a President, Vice-President, Secretary, Assistant Secretary and Treasurer, whose duties shall be those usually performed by such Officers. These Officers shall be the Board of Directors.

SEC. 2.—The Secretary shall be General Manager, and shall have charge of the executive work of the Union, under the advice of the Board of Directors.

SEC. 3.—The Officers shall be elected by ballot, and hold their several offices for one year, or until their successors are elected and qualified.

SEC. 4.—Nominations for Officers shall be sent to the General Manager before the first day of November in each year, who shall cause the same to be printed in the bee-periodicals—and shall be printed and mailed by Dec. 1, with the necessary Ballots, to every member who paid dues for the previous year.

SEC. 5.—The Treasurer shall furnish a bond of $2,000 for the faithful accounting of the funds of the Union, and shall pay out the funds only on vouchers signed by the President and Secretary.

SEC. 6.—The terms of office shall be for the calendar year, and the polls shall close on the last day of December.

ARTICLE IV.—BOARD OF DIRECTORS.

The Officers shall constitute a Board of Directors, which shall determine what course shall be taken by this Union, upon any matter presented to it for action; and cause such extra Assessments to be made upon the members as may become necessary; provided that only one Assessment shall be made in any one fiscal year, without a majority vote of all the members (upon blanks furnished for that purpose), together with a statement showing good reasons for another Assessment.

ARTICLE V.—MEMBERS.

Any person may become a member by paying to the General Manager an Entrance Fee of $1.00, for which he shall receive a printed receipt, making him a member of the Union, entitled to all its rights and benefits until the 31st day of December, following. The Annual Fee of $1.00 shall be due on the first day of January in each year, and MUST be paid within three months in order to retain membership in this Union.

ARTICLE VI.—FUNDS.

The Funds of this Union shall be used for any purposes in the interests of the pursuit of bee-culture, when such are approved by the Board of Directors; and to pay the legitimate expenses of the North American Bee-Keepers' Union.

ARTICLE VII.—SALARIES.

The Salary of the General Manager shall be twenty (20) per cent. of the gross income for each fiscal year.

ARTICLE VIII.—AMENDMENTS.

This Constitution may be amended by a majority vote of all the members; provided that all proposed amendments shall be presented in writing, signed by three members, and sent to the General Manager before the first day of November, so that they may be incorporated into his Annual Report.

[For editorial remarks on this subject see page 764.—ED.]

Freaks and Eccentricities in Bees.

BY G. W. DEMAREE.

The things that bees do out of the general order of things as pertains to their well settled habits, I think are properly called "freaks." Those of us who have handled bees for years, and observed closely their habits, know that bees some times do things that cannot be reconciled to the common laws of reasoning, or instinct. Such acts are freakish—sudden starts in action, governed by no laws, reasonable or instinctive.

I have seen a colony of bees *virtually* attempt to commit suicide, by refusing to accept a queen, or queen-cell, and even refuse to nurse young brood. Some people would be glad to say, "May be they were too old," etc. But this cannot be, for I have wintered many a queenless colony, and made them rear a queen and nurse brood until the hive was well stocked with young bees ready for the main early honey harvest.

Last summer I was walking through my apiary and discovered some bees hopping and crawling on the grass in front of one of the hives. I went up closer, and found the grass for several feet around the entrance covered with partially paralyzed bees, dragging themselves aimlessly about. "A case of paralysis!" exclaims the novice. No; the cause was a "balled queen." Bees often sting each other in their scramble to ball a queen, yet, strange enough, they do not sting the queen.

I have seen a truant swarm leave the apiary and go straight to a hollow tree, and I have seen a swarm of bees leave the apiary with "business airs," and pass over fields and through a dense woods *straight* to a *bunch of ironweeds*, two miles away. I saw one swarm of bees pass through the largest tract of timbered land in the vicinity of my apiary, and settle on a fence near a farm-house, and was taken in by the farmer. I had a swarm of bees take leave of my apiary—as though it was disgusted with such quarters, go a quarter of a mile, settle on a bush, then break the cluster and make a "bee-line" back to the apiary and settle on a tree.

I once saw a swarm of bees "hived" by what may properly be called an accident (?). The swarm was struggling in the air against a stiff gale, and a sudden gust of wind swept them to the ground near the entrance of an empty hive, and the hive acting as a "sounding board" in response to the hum of their wings, the bees caught the sound and hived themselves. My observations have led me to believe that in a state of nature, more swarms of bees find homes by the sense of hearing than in all other ways.

I once saw a swarm of bees in its flight, pass near the top of a large apple-tree, and the rear part of the swarm seemed to catch the sound from a hole in a dead limb of the tree, and made a rush for the hollow limb, while the main part of the swarm was evidently bent on going forward, but the loud "hum" at the hole in the limb prevailed, and the whole swarm attempted to enter a cavity in the limb too small to accommodate half of the swarm. I smoked them out and hived them.

I once had a swarm of bees to refuse to stay in any hive I put them into. Their craze was to locate and build comb on the limb they first settled on, and finally I let a part of the swarm try the experiment. They made a living until the honey season was over, and then starved out.

Bees do some things so wide of the mark of common-sense that their acts are both amusing and astounding to a reasoning mind. The following is an example among many that might be mentioned:

I some times leave on the hive a case of partially-filled sections with honey, to supplement scant winter stores in the breeding department of the hive. Well, in some way a large grey mouse got into one of the cases above the brood-nest, and its escape was cut off by a full brood-nest of lively bees below. It occurred to me that if those bees had stopped to reflect, they might have cleared a way down through the brood department to the entrance, and then sent a detachment of fierce young "buck" bees into the super, with instructions to shriek and yell after that mouse until, panic-stricken, he hied his way—hair and hide—down the cleared way to the open air, and thus summarily eject him as an obstreperous tenant.

But they did no such thing.

They maliciously murdered the intruder, and proceeded to reduce him to as nice, white, clean skeleton as any naturalist ever had the pleasure of adding to his collection of curiosities; "bone to his bone," as clean and nice as if the whole carcass had been boiled, scraped and sandpapered.

I have seen a big bumble-bee slip into a hive when the portals were strongly guarded by vigilant warriors, and I have seen him (?) led out by the ears (?), after he had passed the guards into the dark interior of the hive. Now let some one ask the question, "Do bees see?" along with the query, "Do bees hear?" Such a blunder on the part of the guards of the Czar's palace, would cost them their heads.

In the month of March, some years ago, I was examining my bees to ascertain how they were off for stores to sustain them until the early bloom yielded a supply. In my search through the colonies I found one large colony at the point of starvation. The end with them was so near that not a bee in the hive seemed able to give out more than a feeble sign of life, expressed by a slight motion of her wings. I could not reasonably hope at the time to save more than a part of the large colony, judging that most of the bees must be dead, as there was positively no food left in the hive. The case was a novel one, and required novel treatment. The cluster of bees was exposed to the warmth of the spring sun, and the starving bees were sprayed with warm sweetened water, and the whole of the colony revived. What a case of righteous "socialism" was this!" The food in the hive had been divided to the last drop! Christiansburg, Ky., Oct. 31.

What Dr. Miller Thinks.

HONEY PRICES.—The plot thickens. Lately the editor of this journal said something to the effect that 10 cents was all the producer could realize for comb honey of best grade in Chicago. Now comes Prof. Cook, on page 727, saying, "The Eastern producer secures readily from six to eight cents for extracted honey." But looking at the honey column on page 738, the very highest quotation for extracted except in Philadelphia is seven cents. After taking out freight and commission the producer could hardly have eight cents left. Taking she two statements of Messrs. York and Cook, and comparing the highest prices, it makes extracted honey bring four-fifths as much as comb, whereas the quotations on page 738 make it less than half as much. If the editor would climb up a bit, and Prof. Cook down a peg, perhaps both would be on more tenable ground. [I said on page 716, that it would net the shipper very little, if any, more than 10 cents. It may net 12 cents in some instances. See page 764 for editorial remarks on this subject.—EDITOR.]

THE BEST HONEY.—On page 727, Prof. Cook says: "It is acknowledged everywhere, that California honey is equal to the very best produced in any country." When one's attention is called to it, it is rather amusing to see that statement, or something like it, coming from so many different directions. Prof. Cook is a little more modest than some others, for he doesn't call California honey the best, only equal to the best, while others don't hesitate to say, no matter in what part of the globe they live, that the honey produced there is superior to anything produced elsewhere. I think these statements are in general honestly made. The discrepancies in the statements may be accounted for in two ways: either those who

give sentence are little familiar with any honey but their own, or there is something in being familiar with a particular honey that makes one prefer it simply on account of fuller acquaintance.

I suppose the fact is that there are a good many kinds of good honey, and that tastes vary very much, some preferring one thing and some another, although as already said familiarity with a certain kind may increase one's preference for it. If so, it's a case of reversal of the proverb, "Familiarity breeds contempt."

Another proverb may, however, apply without reversal: "The wish is father to the thought." I'm quite willing to believe that my region produces the best honey, so it takes less to persuade me into that belief.

Sweet Clover.—On page 728, Wm. Stolley says: "Further information about melilot will be given with pleasure, if desired." Friend Stolley, if you're looking for those who desire information, I arise to remark, "I am which." Decidedly and emphatically, I want to know more about your dealings with sweet clover. I gather from what you say that a large part of that 175 pounds per colony came from sweet clover. Now, can you tell us about how much of it you think came from that source? For a second question, will you please tell us in what way you think the most honey can be obtained from sweet clover—by allowing it to grow undisturbed throughout the season, or by cutting it once or more?

But it's more particularly as a forage-plant that we need information about it. When, or at what stage, do you cut it for hay? How may times can it be cut in a season? How does it compare with alfalfa as to difficulty of curing? How much hay per acre? When do you sow, and what is your management to get a good stand? Any other little trifle in the way of information may be thrown in along with these.

The Atlanta Bee-Congress.—I call the editor to order. On page 732 he says: "It will be a fine opportunity for the bee-keepers of the South to get together." Now, he needn't swell up so with Chicago self-esteem as to think no other city can have more than a local gathering. From the reports I see in the papers, of large delegations going from the North, I see no reason why there may not be a general gathering there. Dr. Brown seems to be in the lead, and he's one of the veteran wheel-horses who is not in the habit of doing things by halves. [I still stand by the above quoted sentence. There's nothing in it that prevents Dr. Miller, or any other Northern bee-keeper, being present. I trust it will be a representative gathering.—Editor.]

Putting Bees in the Cellar.—B. Taylor is quoted on page 733 as saying, "From Nov. 1 to Nov. 15 is the proper time to put the bees into winter quarters in this climate." I got mine in Nov. 13, so I was in time, with two days of grace to spare.

The Swarming Habit.—I have read with no little interest the article on page 728, by Bert Lownes. As I have before said, I don't know whether the swarming habit can be bred out, but Mr. Lownes has, in my judgment, failed to produce convincing arguments as to its impossibility. The difficulty of keeping pure a race of non-swarming bees is well presented, and all the arguments in that line—even if the latter be easier—apply to keeping Italians pure. But the single argument in reply to all that, is that Italians *have been* kept pure, else the many that offer for sale pure Italians are ignorant or dishonest.

An argument as to impossibility is, "Because it is contrary to the laws of Nature." Just exactly what is meant by that I don't know, but certainly as very commonly used it is no argument at all, for we are constantly hearing objections to things that have been done because they were against the laws of Nature. If such things have been done, certainly they're not impossible. And I don't see why prevention of swarming isn't also contrary as well to the laws of Nature, and Mr. Lownes does not consider prevention impossible, for he says, "It can be more easily accomplished."

But the matter of impossibility is one of no interest if the thing be undesirable. He makes five points against desirability, partly assertions without proofs, and I don't see any of them that would satisfy any man, who should desire non-swarming bees, that such bees were not desirable for him.

Whether he is correct or not in thinking that prevention is easier of accomplishment, I confess that I am more interested in knowing how to prevent swarming, for the breeding-out business, as he suggests, might take more than my lifetime, whereas a sure plan of prevention, once learned, it could at once be put in operation. I only wish I knew how.

Apiarist and Bee-Keeper.—On page 734 a decided difference is made between an apiarist and a bee-keeper. I don't find any such distinction in the dictionary, which defines "apiarist" as a "bee-keeper." Will the gentleman across the line please tell us where he gets his definition for "apiarist?" Marengo, Ill.

"A Bee-Story" with a Moral.

BY C. W. LEARNED.

A friend received a colony of bees as a present. They were Italians—the only bees "up with the times," and that know a moth from a potato-bug at first sight; and with a pedigree which is supposed to be a hump on the back, like a camel, full of honey to tide over a poor season. In the course of time they had increased to seven colonies, but no surplus honey.

The owner took no bee-paper, but he had a honey-book, the product of a great and mighty bee-man. It contained everything about bees, and more, and after that the deluge. A careful study of the bee-koran, revealed the fact that his bees were in the wrong hives. It was not the standard size. The bee-space was 1/49 of an inch too large, and it was not packed—there was no chaff in it. By looking through a glass hole in the side it was discovered that the frames were hung bottom side up, and all the bees standing on their heads, or suspended in strings and loops, wrong end up, trying to "right ship." It was decided that nothing could be done with such a thing for a hive. A lot of chaff hives were ordered at $65 cash. They were about the size of a railroad tool-house, and formed, like the great Napoleon's army at the Battle of the Pyramids, a hollow square, with the officers and the baggage train in the center, and artillery at the angles. But in this case there was nothing but a rabbet at the angles.

The first department on the ground floor was the brood-chamber, or "queen's own;" above this was the surplus department, said to contain 80 one-pound sections, each warranted to hold one pound of pure honey, including the wood; the center was of wax and bee-gum, and microbes.

The hive rested upon a foundation extending from daylight to the center of gravity, in shape of an elongated pyramid, standing on the apex with the base in the air, like some bee-notions I wrote of some time ago. This foundation was named "Landsdown," after a noted Briton, or from the fact that it reached clear to the bottom. The roof was four-sided, and extended to a point at the top, like the dome of great St. Patrick's church at Rome. This steeple was sharp, to prevent birds from alighting upon it, and defiling the works below.

It was designed to run this apiary on strictly moral principles, and not for money. No bug-juice nor grub-gravy, or "drone honey" would be tolerated—nothing but "pure yellow queen drips." To cover running expenses, it was resolved to place a new and improved line of honey-queens on the market, each with seven bands and a yellow stripe along the spine. To make room for the two extra bands, it was decided to evolute the curve out of the sting, and in so doing obtain a 7-banded, straight sting, striped spine, honey-queen, with a pedigree, all for ten dollars; with this arrangement success was assured, and all bee men and women would be made happy if not rich.

There was to be no extracting from the brood-chamber except in an overflow of honey, when a frame or two would be removed, placed in an extractor, and given a turn or so, after having shaved off the heads of the young bees with a perforated cheese-knife. The extracted honey so obtained would be barreled up and a small amount of formic acid injected to rectify and ripen it up for market. (Answer through the Question-Box how best to collect the surplus formic acid of the apiary for this business.)

Each colony was allowed to cast one swarm only, except a few second ones to supply the loss in wintering. It was resolved to strictly adhere to this rule, and not allow the apiary to out-grow the pasturage, to improve which a patent seed-sower was to be used, something like a double-barrel shot-gun, except it shoots at both ends. This thing would be charged with honey-seeds from the free-seed department at Washington. In riding around the lanes and streets, or country roads, if a likely bit of soil was seen, give it "a charge to keep." This bright idea was gleaned from the bee-koran.

It was decided to divide three of the best colonies. Three ten-dollar 5-band yellow honey-queens with a pedigree were

ordered at $27.50 for the lot. In this way he was able to start off with 10 prime "swarms."

It was expected that the first run (as the maple-sugar maker would say, with his two barrels of cane-sugar to one of maple all in the same pan, and warranted pure) of willow-buds and fruit-bloom would fill the brood-chamber or "queen's own." It was believed that the second run of white clover and basswood would stuff the 80 one-pound surplus to overflowing, and the fall flow of yellow weeds and buckwheat and candy factories (he was located in the city of Detroit) would supply enough for home use, and presents to friends.

It was expected that the improved yellow 7-band honey-queen drips would sell at 20 cents a pound at the apiary. Starting off with 10 colonies at 80 pounds surplus honey each year, and doubling only once a year, at the end of ten years the account would stand this way: Honey yellow queen drips $17,200 pounds, at 20 cents per pound, cash, $163,840. Bees on hand, 5,120 colonies; at $10 each, $51,200. Surplus 7-band queens with yellow spine and straight sting, and no baskets on their legs, five in each hive, 25,600; cheap at $10 each, $256,000. Whole amount, net cash, $471,040. Good for this country, but not up to Texas bees, where all they lack of a good bee-country is water and good society, and that is all Timbuctoo lacks.

It will be noticed that producing honey is a small business compared to that of bees and improved queens. There could have been ten times the number of improved queens reared at no extra expense except the self-destruction of the drones. No account has been taken of the vast amount of wax and bee-gum gathered in from the pitch factories and varnish shops, and tarred cordage; of the shipping in the harbor, all of which furnish a never-ending supply of bee-gum. It was designed to save all this and sell to the foundation-makers (for the benefit of the teeth of the consumers of yellow queen drips) in pound sections with full starters; the proceeds to be devoted to the missionary cause.

All being ready, steam was turned on early in the spring in shape of a large wooden pan contrived for the occasion, full of syrup, and set in front of the hives. The bees came out in good shape, and for about three years the apiary run up and down, and around, while sugar syrup disappeared at an astonishing rate. During the third winter the bees migrated to Texas, or to some happy land, leaving not a pound of honey or a live bee, or a dollar in money, for the owner, and they have never returned. But he has the experiences, and a fine lot of kindling wood, and a bee-book. His smoker some graceless thief stole from the attic of his Napoleon hive; but since his bees are all of the 7-band kind, and quiet, there is not much call for a smoker.

Moral: Take a bee-journal and read it. Study the bee-papers.

Dearborn, Mich.

BEES AND FRUIT.

A Denial of the Statement that Bees Destroy Fruit.

BY JAMES M'NEILL.

HUDSON, N. Y.

MR. GEO. W. YORK—*Dear Sir:* I send you a couple of clippings from our local paper—the Hudson Republican—which will explain themselves. Perhaps my article may serve a useful purpose to the bee-keeping fraternity in furnishing arguments to meet the almost universal complaints which are made by fruit-raisers against bees.

Yours truly, JAMES MCNEILL.

[The following item is the one which appeared in the newspaper named by Mr. McNeill, and which called out his reply.—EDITOR.]

BEES CAUSE TROUBLE.—Fruit-growers in the upper part of the city, and especially those on Academy hill, are complaining of the damage done to fruit by the myriads of bees that abound in that locality. The fruit-growers state that the damage alone to grapes will amount to hundreds of dollars. The bees, they say, are from the hives on the bee-farm of James McNeill, of Greenport, and that a general complaint will be made to him of what the fruit-growers have to put up with.

[Whereupon Mr. McNeill wrote this reply, which appeared in the same paper very soon thereafter.—EDITOR.]

BIRDS DO THE MISCHIEF.

EDITOR OF THE REPUBLICAN:—My attention has been called to an item in the Republican, in which the statement is made that fruit-growers in my neighborhood suffer much because of the myriads of bees which swarm on their fruit, the damage to grapes alone being estimated at hundreds of dollars.

For the purpose of getting at the status of bee-keeping as a legitimate industry, as well as to enlighten the ignorant and promote neighborly feeling, let me present a few facts and arguments.

First, as to the assertion that bees destroy fruit, I would refer those interested to a detailed report of an experiment on this line which may be found in the Report of the Commissioner of Agriculture for 1885, pages 136 and 139. The experiment in brief is this:

A screen-house was constructed in which three colonies of bees were confined, from whose hives all honey had been removed. Plates of peaches, plums and pears in different stages of ripeness were placed on the shelves within the house, as well as 23 varieties of grapes. The bees were kept in a condition bordering on starvation, so that their capacity to injure fruit might be most completely tested.

The experiment was continued during a period of 55 days, and proved conclusively that bees do not injure sound fruit. If the skin of the fruit is broken, injured by decay, or punctured by birds or insects, so that its juice or pulp is exposed, the bees will show their characteristic industry in appropriating the fruit without regard to ownership, but sound fruit is free from their depredations.

It is well known to experienced fruit-growers that certain birds have a liking for grapes and other fruits. The oriole will go from bunch to bunch along a grapevine and take a dab from a berry here and there, and perhaps a score or more of berries will be injured before the bird is satisfied. In a bee-keeper's neighborhood there are thousands of bees for every bird. The bird, which really does the mischief, is rarely seen, while the bees, being so much more numerous and less timid, are very much in evidence.

Then there are wasps and hornets with strong mandibles, and a love for sweet juices. These, like the birds, are guilty in the first degree, while the bees only appropriate that which would otherwise go to loss.

There is another point of view from which it may be well for fruit-growers and others to look at this matter.

Many seem to talk and act as if they would have as just a claim for damages from bees as from chickens, dogs, or any other domestic animal. If it were possible to fence bees in, or practical to shut them up, such claim might be reasonable and right. But, however desirous a bee-keeper may be to prevent his bees from annoying his neighbors, he is powerless in the matter. And to enforce the law for trespass against bees as stringently as it may be enforced against domestic animals, would simply be to drive bee-keeping as an industry out of existence; and the question recurs, would it be better for the community in general to have no bees than to suffer such occasional annoyance from bees as are unavoidable?

While bees may certainly make themselves quite a nuisance at times, it must not be forgotten that they perform a most useful service to the community in general, and perhaps to the very same people who are loudest in their outcry against them.

It is a fact not very generally known that bees are an important agent in fertilizing flowers. We often hear it said that a long, cold rain during fruit-bloom drowns the blossoms so that no fruit comes from them. The true explanation of the blight of the blossom, lies in the fact that the rainy weather prevented the bees from working on the bloom and thus fertilizing it.

In Australia they were unable to raise clover seed until bumble-bees had been introduced to fertilize the blossoms. And our great seed-raisers have learned that any apiary is a very important and useful adjunct to a seed-farm.

Bees, then, have a claim to consideration from the general public far beyond any damage which they may do, and they are rarely troublesome except for a few weeks in the fall when dry weather has cut off their natural food supply. If individuals suffer occasional annoyance from them, such annoyance is merely incidental and unavoidable.

The scream of the railroad whistle, the puff of the engine, and the rattle of the train, are the sources of much annoyance to sensitive and delicate people, and not infrequently result in the loss of human life, but no one thinks of holding the railroad responsible for damages from this cause, for the simple reason that such annoyances are unavoidable, and the benefits which the general public derive from railroads by far outweigh the evils which are their necessary accompaniments.

JAMES MCNEILL.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Starting in Bee-Keeping.

I should like to have some advice about entering into the bee-business. While I don't suppose it is your business to start men in this line, I thought you might advise me as to finding out the proper way to begin in a small way.

Lynnwood, Va. S. H. L.

ANSWER.—Whew! That's a pretty big topic, and it might be answered a good many ways, depending upon circumstances, and also depending upon the person. As to all these I know nothing, don't even know whether you're red-headed or bald.

If your idea is to keep a few bees on a farm, that's one thing; and if you mean to go into the business as a principal means of obtaining a livelihood, that's another thing. But I'll give a few hints as to what I'd do if I wanted to make a thorough business of it. I think the first thing I'd do would be to get a good text-book on bees and read it through very carefully. Don't try to remember all that's in it, just try to understand it as you go along. There's a good deal of time from now till next spring, and you needn't greatly hurry. After you've read the book through, I hardly know of anything better you can do than to read it over again. If you are interested in the reading it won't do any harm to read it a few times more, and perhaps get one or two bee-books more to read. After you've read the book through about the second time, you'll find a bee-paper very interesting reading, if indeed you have none already.

Toward spring you'll begin to cast about to see where you'll get your start in bees, if you have none yet. If you had asked the question in the spring I'm not sure but I should have said to get the bees the first thing, but as you will do best not to get the bees before spring, you may as well be improving the time in the meanwhile, and you'll be just that much ahead.

If you get the bees near by for a reasonable amount, that will probably be the best way, for expressage costs a good deal if you get them from a distance. If you cannot get them near by, consult the advertisements and price-lists as to getting them from a distance.

But it's a good while till spring, and after you've done two or three months reading you'll have a good deal more intelligent idea as to what you want to know, and will be in position to ask directly for what you want, so at that time ask all the questions you like, and I'll answer to the best of my ability.

Whence Came Those Queens?

A colony of bees cast a swarm June 2, which was hived on full sheets of foundation on the old stand. On Aug. 4 this also cast a swarm in my absence. The queen being clipped, they returned to the hive, and on my arrival I gave the queen a frame of brood and placed her beside the old hive. August 12 a large swarm came out, but returned and clustered on one corner of the hive. These all entered the hive but about a pint. Thinking they would all go in, I went to dinner, but they went to the woods.

After dinner I examined them, and finding two empty cells I carefully cut out the remaining ones, and closed the hive.

August 14 they came out again, and were hived on full sheets, and placed beside the parent colony, but in about two hours they came out and returned to the old stand. August 21, again swarmed, were hived, but returned as before. August 25 those bees came out again, and were hived as before, while I started in to find why they would not stay in the hive. I found three or four empty queen-cells, and some yet unhatched, but no worker-brood. I cut out all the cells and returned those bees to the hive, and there they are to this day. But whence came those queens? D. L. M.

Tidioute, Pa.

ANSWER.—Your question is something of a puzzle. In more ways than one, for some two months ago you sent it to me and I puzzled no little to know where I should answer it. Your letter had no signature, no place, no direction as to what paper you wanted the reply in, and nothing legible in the postmark except the State. I knew very well some one was probably saying some hard things about me for not making reply, but please tell me what I could do.

But now to your question. First let us get the facts before us.

Aug. 4, a prime swarm issued.
Aug. 12, a swarm issued and returned.
Aug. 14, ditto.
Aug. 21, ditto.
Aug. 25, a swarm issued and returned, when empty cells, and cells yet unhatched, were found left in the hive.

According to the appearance of things, there was no laying queen in the hive after Aug. 4. On that date a prime swarm issued, taking with it the old queen. Eight days later an after-swarm issued at about the usual time for the first after-swarm, and for some reason returned—not an unusual thing. The repetition of this on the 14th was nothing unusual. Not so common was the occurrence on the 21st and 25th, but these might be easily accounted for by saying that the bees went out with the queen on her wedding flight.

That accounts pretty easily for all the queens in the case, but I'm afraid you'll ask me to account for the queen-cells in the hive Aug. 25. I confess I don't know. I can give a guess, although not a very satisfactory one. It is not an uncommon thing for bees to allow queen-cells to remain without being torn down for a good many days. So the cells you found empty on the 25th may have been left from the 12th or 14th. As to the cells still occupied the 25th, there is a bare possibility that you were deceived as to their being occupied. Bees often fasten down the cap of a cell after a young queen emerges, making it look exactly like a good cell containing a young queen, and if you simply cut out the cells without examining them, they may have been of this sort. But you can probably tell whether that was so or not.

Another guess is that a small stray swarm with a queen entered the hive at some time, and the queen was killed after being allowed to lay merely the eggs that were in the queen-cells. Indeed, it would be nothing impossible for the old queen to have swarmed out of the nucleus and returned to the old hive. I once had a case of exactly that kind. If she did so, finding the colony in a swarming mood, it would be nothing strange for her to lay eggs in queen-cells, then swarm out, and there is such a possibility as her returning to the nucleus on swarming out. That would satisfactorily account for the presence, Aug. 25, of cells occupied and unoccupied. If any one has a better guess, I yield the floor.

Wintering Bees—Keeping Mice Out of Hives.

I have three colonies in Simplicity hives with loose bottoms, with 8 frames nicely filled with honey. I wish to winter them in the cellar, which ranged from 50° to 30° last winter. I left the hive-bottoms on last winter, and the bees began to crawl out of the hive wet as rats. The part of the cellar they were in was pitch dark, but well ventilated. About the middle of March I had to carry them out on the summer stands. I raise the hive about a foot from the cellar bottom. If I leave the bottoms off the mice will destroy them. Would I better put screen on and the hives on scantlings set on bricks about one foot from the cellar-bottom, to exclude mice, or put the screen on the hive before carrying them in? Should I use fine or coarse screen? Is the plan good? I can't be sure of getting rid of the mice as they appear after I think I am rid of them. I hang carpet around the hives to make it dark, and let in air every day. The thermometer registered 40° to 45° most of the time.

If I take off the hive-bottoms, and try to carry them out in the spring, would the bees fly out and make a bad mess? Is there any other plan that is better? Should I tack the wire on the hive, and remove it when I put them out in the spring? J. M. Q.

Syracuse, N. Y.

ANSWERS.—You must fasten the mice out of the hives, but you mustn't fasten the bees in the hives. They'll not stand that. So any screen you use must be close enough so mice can't pass through, and coarse enough so bees can easily pass through. The kind I use has three meshes to the inch. Make a shallow box about an inch and a half or two inches deep, the same width as your hive, and about three inches longer than your hive. No cover to it, and let one end be open. Set the hive on it, letting the open end of the shallow box project at the front end of the hive. This shallow box I call a reversible bottom-board, for in summer I turn it t'other side up, and it makes a good bottom-board for summer. You can fasten hive and bottom-board together by means of what

are called "tobacco staples," and if you can't conveniently get them, use strips of tin. Let the strips be about two inches long, and ¾ to an inch wide. Make a hole in each end of the tin, then put the tin so half its length is on the hive and the other half on the bottom-board, and drive carpet tacks in the holes. That makes plenty of room below the bottom-bars for the accumulation of dead bees without clogging the entrance.

Now for the screens. Take a piece of wire-cloth having three meshes to the inch, cut it as long as the inside width of your bottom-board, and wide enough so that when it is placed to close the entrance, it will project upwards about an inch on the hive. It will be held in place by a stick ¾-inch square, and as long as the outside width of the hive, the stick being fastened by light nails.

Canadian Beedom.

Going It Blind.

I know of at least five persons in my immediate neighborhood who, during the past season, have commenced bee-keeping in entire ignorance of the pursuit. Vainly have I tried to impress upon them that it is sheer folly to embark in this business without the help of a manual and a bee-journal. I have shown them samples of the American Bee Journal, and represented to them that they can have it for a year, also a copy of "Bees and Honey," at the low price of $1.00—but to no purpose. Such people are pretty sure to make a failure of bee-keeping, and they deserve to do so.

Clipping Queens' Wings.

Dr. Miller's "Canadian friend" makes his best bow in acknowledgment of the graceful compliments paid him on page 711. In return, I must own that the worthy Doctor keeps his end up well, and makes the best of a lame cause. It does not seem to me that there is much force in the argument derived from a horse that has had his tail docked. One of the objections to this cruel practice is that when the maimed creature switches his stub of a tail to get rid of the fly that is biting him, he loses his labor, and is tantalized at once by the fly and the failure of his attempt to drive it away.

I do not remember that I ever saw a queen exercising her wing machinery except in actual flight, but she may do it for all that. Her feminine modesty leads her to hide, if possible, away from prying eyes. She may take her "gymnastics" when she is not "all exposed before the sun," and in the presence of strangers. I presume Dr. Miller takes his daily bath, but I never saw him do it, though I have been in his company many times. I simply give the theory for what it is worth.

The Doctor admits the law that disuse of an organ causes it to shrink and lose capacity. In the course of generations of disuse the organ may become permanently impaired, and at length disappear. If clipping the queen should at all impair wing-power in her race, it would be a serious, if not irreparable, loss, because the usefulness of the insect largely depends upon its power of flight, especially in localities where long distances have to be traversed, If Dr. Miller does the least injury to his bees by clipping their queens' wings, then he is not justified in saying, "I'm not as bad as the ants," because he has a far higher gift of reasoning power than they have.

Mr. R. L. Taylor's Bulletin for September—Foul Brood.

Owing to the character of the season of 1895, all experiments into which swarming was to have entered in any way were necessarily defeated, as the swarms were not to be had. On account of the drought, there was not only no honey-flow, no swarming, and no surplus, but the amount of stores and brood in the hives diminished almost to the vanishing point by the first of August. One other curious result seems to have followed this almost total consumption of stores, some of which had been in the hives for years, and that was the development of several cases of foul brood, which was evidently of a very malignant type. Great care was taken to discover all these cases of the disease, and when the slight honey-flow began early in August, prompt steps were taken to effect a cure.

Mr. Taylor's mode of accounting for this outbreak of foul brood is not inharmonious with Mr. Cheshire's contention, that it is impossible for bacilli to multiply in honey, because they cannot grow in any fluid having an acid reaction. But while not multiplying in honey, the bacilli may, he thinks, remain in it for months without sprouting. If for months, why not for a longer period? If these bacilli, after remaining dormant in honey for a longer or shorter period, are brought into contact with any substance that furnishes a culture for them, such as a larva, they may at once become active, and multiply at a rapid rate. This is one of various causes of a renewed outbreak of the disease when the bee-keeper is flattering himself that it has been extirpated. The facts brought out in this bulletin on this point are full of warning, and show that eternal vigilance is the price of immunity from this fell disease.

Bacilli are minute bodies that multiply very rapidly when quickened into active life. A single dead larva is capable of containing millions of spores, and if, as it would appear, the bacilli are liable to occur in honey even as an occasional contamination, old stores may be a fruitful source of danger. Mr. Taylor's apiary was probably not the only one in which honey that had been consumed almost down to the vanishing point, may have contained dormant bacilli, and it will be wise for bee-keepers to be on the alert and watch for any manifestations of disease that may appear next spring.

An interesting experiment is detailed in the Bulletin in regard to queens from foul-broody hives conveying the infection. A queen from a colony affected with foul brood of the worst description was caged and put into a healthy colony April 20. In 36 hours the queen was released, accepted by the bees, and began to deposit eggs within a few hours. Repeated examinations were made during the season, but there was no appearance of the disease. Mr. Taylor draws no positive conclusions from this one case, rightly remarking that it would not be wise to rely absolutely even on a dozen such experiments, for so far as yet known, though 49 queens might be used without conveying the disease, the introduction of the 50th might entail costly consequences. It is not yet absolutely certain that the colony which was the subject of the experiment has escaped. A diseased cell or two may have been overlooked in the scrutiny, and the plague may be dormant for a considerable time before becoming visibly developed.

The closing paragraph refers to alleged cases in which foul brood has disappeared of itself, but farther investigation is needed in regard to such cases before any positive conclusions can be reached in regard to them.

The American Bee Journal.

I note the two paragraphs in the "Editorial Budget" for Nov. 7. The first disclaims the paternity of the large family of bee-papers that has come into existence, while the second makes a well-founded appeal for help in enlarging its field of usefulness. I endorse both paragraphs.

In all-round ability, the amount of information given, and cheapness, the American Bee Journal outstrips all its rivals. I do not see how it is furnished at such a low subscription price. It must be that Editor York is putting capital into it with a view of returns in the future, or else that he has a wealthy Company behind him that is doing it. Notwithstanding the improvements made during 1895, the pledge is given that there will be greater things than these during 1896. "Forward" is to be the watchword.

A prompt payment of subscriptions and a little earnest canvass for new names would be but a reasonable return for the efforts Editor York is making to give his patrons all he possibly can in return for their money.

[I might say to the foregoing that there is no wealthy Company backing the American Bee Journal. It is only by hard work and the strictest economy that I am able to make it what it is.—Editor.]

Breeding and Crossing of Bees.

Taking together the account in Oct. 10th number of the Bee Journal, and Mr. McArthur's articles Nov. 29 and Dec. 6, 1894, describing the bright, gentle, and industrious bees bred on Toronto Island, I find that Mr. McArthur began with a Carniolan queen mated to a choice Italian drone, and that he bred her daughters to drones from the same Italian queen, and so on down to the 24th generation of daughters, granddaughters, etc., of the Carniolan, mated in every instance to

Italian drones, brothers of the same drone that fertilized the original Carniolan. Also the articles state that from the 16th generation they have been fixed as to characteristics, working, etc. I have been figuring thus:

The first daughter was ½ Carniolan, the granddaughters ¼, and the great-granddaughters ⅛ Carniolan; and so it has continued in geometrical progression. The queens of the 16th generation had 1/65,536 of Carniolan blood, and their bees ½ as much. The queens of the 24th generation have 1/16,777,216 of Carniolan blood, and their workers ½ as much. Now would you not call them homeopathic Carniolans?

1. The question I wish to ask is this: Does such a small quantity (a mere speck, and hardly that) of foreign blood in Italian stock make any difference with them? Could not pure, choice Italian stock, by just the same course of selection and in-breeding, be modified just as much, and be made to become just as good?

2. If one is aiming to produce a characteristic Carniolan and Italian cross, to be bred into a race having the combined character, should he not establish the proportion of blood desired, as half Corniolan and half Italian, or quarter Carniolan and three-quarters Italian, and then breed from such proportion in both queens and drones to the 16th or 24th generation, having several parent stocks of crossing from unrelated pure bloods, to mitigate the in-breeding?

These questions are asked sincerely, for information.

Monterey, Calif., Oct. 22, 1895. A. NORTON.

Southern Department.

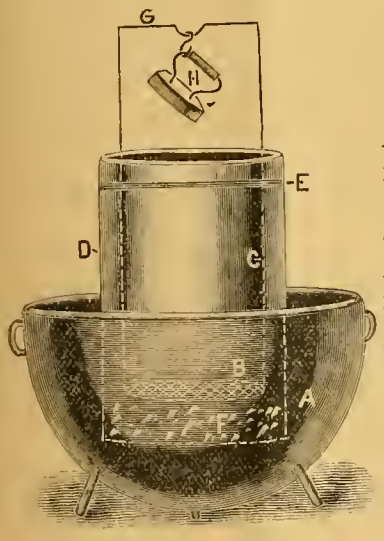
CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

Rendering Beeswax.

There is no vexation of the flesh to be compared with what I have had in my search for the best method in rendering beeswax. Every article on the subject, that was within my reach, I read and studied with care. I tried fire, hot air, steam, and the sun processes, but with little satisfaction. The



A—Iron-Kettle.

B—Network of wire or of spiral form, at one end of the wire press.

C and G—Wire Press.

D—Tin Can.

E—Piece of wood to keep the wire press in place.

F—Comb in bottom of Can.

H—Smoothing-Iron.

Arrangement for Rendering Comb into Wax.

extracting was either too slow, and wasteful, or proved damaging to the wax. The straining process has virtually metamorphized my good nature into ill-temper, and made me exceedingly unpopular with the women of the kitchen. The last time I strained wax over the kitchen stove, the wax caught fire, ran all over the stove, and over the floor of the kitchen, and so furious was the conflagration, that the wonder was that the house was not burnt down to the ground. Afterwards, the effluvia of that stove was for a month intolerable; and the wax on the floor was a sticky nuisance for over a year! After such a dynamitic pyrotechny, would you blame the ladies of the kitchen if they objected to having wax brought within their culinary quarters again?

Some philanthropic bee-man may suggest to me to use the "wax-extractor," I know nothing about that machine, but I know enough about the adhesiveness and gummification of beeswax, on a philosophic theory, to believe that it cannot be thoroughly and economically rendered by machinery. If it had the nature of pure oil or water, I would not have these pessimistic views about it.

It is said that necessity is the mother of invention. Recently I had a great amount of wax to extract. I had again put on my armor of wax-troubles. But this time I cut loose from all precedents, and made it a serious, sober study. A nocturnal meditation—an intellectual insomnia, induced by a hearty supper with an extra cup of Java, solved the problem to my satisfaction. I fixed on a plan which was at once put in execution, and with most gratifying results.

My present mode of extracting beeswax is as follows: A large iron wash-kettle is filled about one-third full of water, and placed over a fire. The comb to be rendered into wax is placed in a sack of cheese-cloth, and packed down by pouring over it boiling water. This is done in a tin can of about a foot in diameter, and three feet high. After the bag is nearly filled, the tin can containing it is placed inside of the iron kettle. To keep the bag with the wax fixed to the bottom of the can, and at the same time under the hot water a few inches, insert a press made of wire, with two uprights, but united above. To the cross piece of the wire above suspend a smoothing-iron, with a hook, in order to keep the bag under water, and to maintain a constant gentle pressure. A brisk fire is maintained under the iron kettle; and the water in both vessels is kept to a boiling-point, until the wire press has settled so far to the bottom to show that the wax may have been all extracted, and was now floating on the surface.

After the above process is completed, withdraw the fire, and when the water gets cold, remove the wax from the can. If removed in broken pieces, which is usually the case, it is afterwards melted on a stove in a suitable cake for the market. If the cake in the can is likely to be too thick, the wax had better be skimmed off before it consolidates.

Now, this way of rendering wax is to do quick and very neat work, with no mishaps, and with little or no waste. And the cost of the machinery is in keeping with the business! Some times, after removing the wax from the tin can, I give the *debris* a second boiling, should the first boiling not bring all the wax to the surface. Through this process of ebullition, the wax of black comb becomes comparatively pure, leaving its pigmentous properties in the water, which is turned black and dirty. For a second or subsequent boiling, change the water in the can. DR. G. P. HACHENBERG.

Austin, Texas.

Changing the Location of Hives, and Packing with Leaves.

1. I have 19 colonies of bees, and the hives stand in all directions. How would it do to turn them all with the front towards the east, and place in a row, about six or eight inches apart, and cover and fill in between with leaves, and protect the back end by building up and filling also?

2. If I should move them and put in a row, how can I keep the bees from coming out on a warm day and going to the old stand? J. J. W.

Mayking, Ky.

ANSWERS.—1. I am of the opinion that it would be useless to pack your bees in the manner you suggest for winter protection in your location. The most desirable consideration would be to see that each colony had from 20 to 30 pounds of stores, or sufficient to carry them to the first of April.

2. I would move them some cold day, and set up pieces of boards, or some other obstruction in front of the entrance, to assist the bees in marking the new location. During the first flight you may expect some little confusion, but nothing to amount to anything. Very few bees will get lost.

The International Bee-Keepers' Congress.

The City Hall has been secured for the meeting. Excursion rates to the Exposition can be obtained from all the principal towns and cities. Rooms can be had at the Jackson Hotel (near the depot, and one block from the place of meeting) for 75 cents per day, and 50 cents for meals. The Jackson is a new hotel, and good place. Those who want less rates can find them at the Adkins House, 12 Broad Street.

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Editorial Budget.

Among the Callers at the Bee Journal office last week were, Mr. F. Grabbe, of Libertyville, once a part owner of the Bee Journal; Mr. M. M. Baldridge, of St. Charles, and Dr. C. C. Miller, of Marengo—all Illinois bee-keepers. Dr. Miller and I attended the Illinois State Bee-Keepers' Convention together, for which purpose he came to Chicago.

Mr. Will Ward Mitchell wrote a very fine tribute to Father Langstroth, which was published in the November Progressive Bee-Keeper. By the way, "Will" is a rising "Mizzoory" poet. One of his rhymes graces the before-mentioned paper each month. Should his poetical propensities ever incline toward singing the songs of beedom, he may some day reach the exalted position of "Poet-Laureate of Apiculture." Thus far, I believe Hon. Eugene Secor gracefully, as well as rightfully, wears that honor.

The Illinois State Convention was held at Springfield, last week Tuesday and Wednesday. A very interesting meeting was the result, and steps were taken, which, if properly directed, will result in the largest membership of any bee-association now in existence in this country. The full report, which will appear soon in the Bee Journal, will give the particulars.

The newly-elected officers of the association are these: President, Dr. C. C. Miller, of Marengo; Vice-Presidents, 1st, J. Q. Smith, 2nd, C. P. Dadant, 3rd, S. N. Black, 4th, Mrs. L. Harrison, 5th, Geo. F. Robbins: Secretary, Jas. A. Stone, of Brantford; and Treasurer, A. N. Draper, of Upper Alton.

Next week I will endeavor to give a short account of the trip to Springfield, and other notes and incidents of the convention.

Chicago Honey Prices are touched on by Dr. Miller, on page 758. I think, possibly, there should be a reform made in the manner of quoting the honey market. It seems to me that the actual wholesale selling prices of honey on the very day the dealer quotes, should be given. Then the producer himself can deduct the 5 or 10 per cent. commission usually charged for selling, and also the freight charges, when he will have the price that his honey will net him.

As Mr. R. A. Burnett and Mr. J. A. Lamon represent the Chicago honey market pretty well, and have had much experience therein, I want to invite them to write their views in regard to the matter of quoting the honey market, for publication in these columns. And if I have not suggested the way in which producers want the markets quoted, will they please indicate what they think is necessary, or what change they would like. It is possible I am all astray in this matter, but it does seem to me that there should be a better understanding between honey-producers and the commission-men.

Honey-dealers in other cities can also send me their views, if they so desire. Probably a little discussion on this subject might prove helpful all around.

The Rural Kansan is now what was formerly the Kansas Bee Journal. It is published at Topeka, Kans., and aims to cover almost every "rural" subject.

The New North American.—On page 757 will be found "The Report of the Committee on Amalgamation," appointed at the Toronto convention last September, and who were to report in the bee-papers. I want to call particular attention to the proposed new Constitution. I feel that in uniting the North American Bee-Keepers' Association and the National Bee-Keepers' Union upon such a platform, the grandest bee-apiarian society ever known in this or any other country will result—if properly conducted and pushed. I am ready to use my little influence and efforts to further its work and usefulness.

As the committee appointed at the Toronto convention was given "full power to perfect the same" (the amalgamation), their report is mainly an address to the members of the National Bee-Keepers' Union, the majority of whom, I believe, will be pleased with the proposed amalgamation, and work hard to make it a great success.

The subject is now thrown open for suggestions and discussion.

Bees in Moravia.—"In thirty-six school districts in the diocese of Brunn, in Moravia, there were, in 1859, 5,650 bee-keepers, with an aggregate of 22,591 colonies of bees."—American Bee Journal for 1861.

Mr. S. T. Pettit, of Belmont, Ont., thinks that the Report of the late Toronto convention, published in the Bee Journal recently, places a full half of the blame upon his shoulders for the semi-disturbance which occurred in the discussion on apiarian legislation during the last session of the meeting. I did not so interpret the Report, and am glad to be able to say that, so far as I could see (and I was there), Mr. Pettit was in no way responsible either for the selection of the subject of legislation, or for the unpleasant and (to me) much-regretted discussion upon it. While he took a prominent part in this particular discussion, it seemed to me to be entirely against his wishes, and but for being almost driven to it, he would have preferred to say nothing.

But, after all, nearly the whole subject of legislation for bee-keepers, as presented and discussed at Toronto, properly belonged to a meeting of the Ontario Association, and not to the North American. It was principally a Canadian affair, in which the great majority of the United States bee-keepers there present felt little if any interest. However, now that all is past, the sooner that part of the Toronto convention is forgotten the better.

Selling Honey on Commission is not always satisfactory to the producer. A clear case of this kind was brought to my notice quite recently. Mr. L. M. Willis, of Wisconsin, shipped 549 pounds of comb honey to a Chicago firm (who do not now advertise in the Bee Journal) to be sold on commission. The firm had sent out glowing circulars soliciting shipments, and quoting high rates on honey, which they claimed to had received on some lots.

Upon the representation that he would receive prompt

returns and good prices, Mr. Willis sent his honey—about Sept. 15. For the same kind of honey he says he had been getting, in his local market, 12 and 12½ cents. November 5 he received his prompt (?) returns, the dealer, after deducting 10 per cent. commission and the freight, sending the high (?) price of a trifle over 8 cents per pound, for only 538 pounds, claiming that the honey was broken down!

Of course, Mr. Willis believes he has been swindled, as he, with three neighbor bee-keepers, saw the honey leave for Chicago in good condition, and being well packed, they could see no reason for much, if any, breakage.

I saw the commission firm in regard to the matter, but of course nothing satisfactory could be secured, and as the amount involved was scarcely worth lawing about, I advised Mr. Willis to drop it.

Now, out of all this there are several lessons to be learned, and facts to be observed. First, every bee-keeper who sends honey to a commission man is at the mercy of that commission man. Second, no one should be misled by finely-worded circulars soliciting shipments, particularly if the prices quoted are higher than others in the same market quote.

While I know there are some honorable commission men in Chicago, I also know there are plenty who are not. Hence, I feel sorry for the honey-producer and farmer, who, after working hard to produce a nice crop of anything, are almost compelled to trust their goods to those who have so much chance to take advantage of them.

Now, as to selling honey on commission, I can only give the oft-repeated advice—don't do it, but sell in your home market if at all possible. If you have no local market, or one not large enough, why not make one and extend it sufficiently to take your crop?

Of course, I know that where a bee-keeper produces 10 or 20 tons of honey he can't sell it all at home. But such can afford to look up responsible city firms to handle the crop. It is generally the small shipper that has to lose, for usually the loss is scarcely large enough to warrant making trouble for the dealer, and yet it is sufficiently large in many cases to be keenly felt by the producer.

Let me say, it is always safer, before shipping to any new commission firm who pretend to be able to do better than those well-known, to enquire whether it be true that they are the men that determine the prices in their market. As in Mr. Willis' case, it may prove to be a firm who are new in the business, and who have much to learn ere they reach the height to which, in their own estimation, they have already attained.

Father Langstroth's Bee-Library is for sale. It consists of about 100 volumes, dating from 1579 to 1891—over 300 years. The works are in English, French, German and Italian. This Library is about the only thing of value that our lamented Langstroth left, and it is desired that it shall realize to his heirs as large a sum as possible.

I have thought that possibly some State Agricultural College might purchase it, as such an institution likely could afford to pay more nearly its value than could any single individual. It is probably the finest collection of apiarian works in this country, and would be a rich thing for any institution to add to a growing library.

It was Father Langstroth's wish that his bee-library always should be kept together—not sold a volume here and a volume there. It contains some very rare books on the subject of bees—some that very likely cannot be found elsewhere. On this account it is indeed of high value.

After the death of Father Langstroth, I wrote his widowed daughter—Mrs. Cowan—asking if there was anything I could do to aid her. She replied that may be I could help her dispose of her father's large bee-library. That explains why I take this way of calling attention to the matter.

Now, will those who have any influence with managers of schools and libraries please bring this to their notice, and endeavor to have some one of them make the purchase? I think probably it would be as well to invite bids for it, and the highest to claim the prize. Let it be understood, however, that Mrs. Cowan reserves the right to reject any or all bids. This will be eminently fair to all. Please mail the bids to the American Bee Journal, 56 Fifth Ave., Chicago, Ill.

In order that all may know what they are bidding on, I append a list of the books in the

BEE-LIBRARY OF THE LATE REV. L. L. LANGSTROTH.

Hyll on Bees, by Thomas Hyll, 1579.
Four books on Husbandrie. One of the rarest old agricultural works in the English language.
Hiresbachn Husbandrie, by Googe, 1586.
History of Bees, by Charles Butler; 2 Vols., 1623–1634.
Insectorum, by De Novert, 1634.
Legacies of Husbandry, by Hartlib, 1655.
Bees, by Moses Rusden, 1679.
Mystery of Husbandry, by J. W. Gent, 1687.
Apiarian, by J. W. Gent, 1691.
History of Bees, by Charles Butler, 1704.
Trait Des Abeilles, by M. D. L. S. Pretre, 1720.
Complete Bee-Master, by John Gedde, 1721.
True Amazons, or Monarchy of Bees, by Joseph Warder, 1726–1765.
Biblia Naturi, Vols. 1 and 2, by Jan Swammerdam, 1738.
Female Monarchy, by John Thorley, 1746.
Essay on Management of Bees, by John Mills, 1766.
Wildman on Bees, by Thomas Wildman, 1768–1770.
Les Abeilles—Poeme traduit de l'Italien, by De Jean Rucellai, 1770.
Schirach's Bienenzucht, by Johann George Bogel, 1774.
Key's Bee-Master, by John Keys, 1780–1796.
Rei Rusticæ Scriptores, 4 Vols., 1787.
Bees, by James Bonner, 1795.
Natural and Enigmatical History of Bees, From Reaumur, 1800.
Management of Bees, by Daniel Wildman, 1801.
Les Abeilles, by M. Lambord, 1802.
Insectorum, 2 Vols., by Maximilianus Spinola, 1809.
Ruche Francaise, by Barembey, 1811.
Bee-Preserver, by Jonas De Gelius, 1829.
Management of Bees, by James Thacker, 1829.
Fragments D'Hubert sur les Abeilles, by M. Le D'Mayraux, 1829.
An Essay on Bees, by Jerome and C. Smith, 1831.
Humanity of Bees, by Thomas Nutt, 1839.
Sur Les Abeilles, by Francois Huber, 1840.
Weeks on Bees, by John M. Weeks, 1840.
Wighton on Bees, by John Wighton, 1842.
Conservateur Des Abeilles, by Jonas de Gelius, 1843.
Bar and Frame Hive, by Munn, 1844–1851.
Huish on Bees, by Robert Huish, 1844.
The Shilling Bee-Book, by R. Golding, 1847–1848.
Humanity to the Honey-Bee, by Townley, 1848.
Artificial Swarms of Bees, by Edward Scudamore, M. D., 1848.
American Bee-Keepers' Manual, by T. B. Miner, 1849.
Taylor's Bee-Keepers' Manual, by Henry Taylor, 1850–1860.
Milton's Practical Bee-Keeper, by John Milton, 1851.
English Bee-Keeper, by a Country Curate, 1851.
Hive and Honey-Bee, by L. L. Langstroth, 1853.
Hive and Honey-Bee, by H. D. Richardson, 1853.
Bee-Keepers' Handy-Book, by Henry Alley, 1855.
Des Abeilles, 1855.
L'Education des Abeilles, by Jean Francois Roux, 1856.
Manual for Managing Bees, by John M. Weeks, 1857.
Guide De L'Apiculteur, by M. Debeauvois, 1856–1863.
Bees and White Ants, by Dionysius Lardner, 1856.
Bee-Keepers' Chart, by B. W. Phelps, 2 copies, 1858.
Cours D'Apiculteur, by H. Hamet, 1859–1866.
The Honey-Bee, by James Samuelson, 1860.
Bees, by J. G. Wood, 1853–1862.
L'Apiculteur, by Hamet, 1856 to 1864.
Bees and Bee-Keeping, by W. C. Harbison, 1860.
Traite D'Apiculteur Pratique, Jean Baudet, 1860.
Bees, by H. Hamet, 1861.
Bee-Keepers' Dictionary, by J. S. Harbison, 1861.
Key to Bee-Keeping, by M. Metcalf, 1862.
Bee-Keeping, by Times Bee-Master, 1864.
Secrets of Bee-Keeping, by R. P. Kidder, 1863–1868.
Des Abeilles, by H. Hamet, 1864.
Pratique Complete D'Apiculteur, Par un President d'un Comice Agricole du Finestere, 1864.
Bee-Keepers' Text-Book, N. H. and H. A. King, 1864–1867 1869-1872–1878.
The Apiary, by Neighbour, 1865–1866.
Italian Bee-Book, by R. P. Kidder, 1865.
Bee-Keeping, by Quinby, 1865.
L'Abeille, Dr. F. Monin, 1866.
The British Bee, by W. E. Shuckard, 1866.
Handy Book of Bees, A. Pettigrew, 2 copies, 1870.
Bevan on Honey-Bee, by W. A. Munn, 1870.
L'Apiculteur, by M. H. Hamet, 1871.
Annals of Bee-Culture, by D. L. Adair, 1872.
Bee-Keepers' Magazine, Vols. 1 to 5, bound, 1873 to 1877.
A Manual of Bee-Keeping, by John Hunter, 1876.
The Blessed Bees, by John Allen, 1878.
Manual of the Apiary, by Cook, 1879.
Quinby's New Bee-Keeping, by L. C. Root, 1879.
Bees and Honey, by Thomas G. Newman, 1882.
American Apiculturist, 1883–1884.
Hive and Honey-Bee, by Langstroth, 1884.
Dictionary of Practical Apiculture, by John Phin, 1884.
A Practical Treatise on Bee-Culture, by Rev. Wm. Ballantyne, 1884
Bird's-Eye View of Bee-Keeping, by Rev. Wm. F. Clarke, 1886.
Hive and Honey-Bee, by Langstroth, 1888.
Bee-Keepers' Guide, by Prof. A. J. Cook, 1888.
A B C of Bee-Culture, by A. I. Root, 1891.

Among the Bee-Papers

Gleaned by Dr. Miller.

NEW OR OLD COMB.

In France the opinion has been held by many that, between 4 and 6 years, the combs are too old to be of any use to the bees, as the cells are by that time too small, on account of the successive generations of bees hatching in them, and because they "darken the honey." This last opinion is due to the dark sealings. Every one knows that bees will seal their honey very near the color of the comb; and here the races give different color to the sealings of honey. I have frames and combs that have been in use ever since I began bee-keeping; and when we first started we bought jar hives which had been used many years, so I know that twenty-year-old comb is very good, and I would not call it old; nor am I now discarding any.—P. J. BALDENSPERGER, in Gleanings.

MAILING QUEENS LONG DISTANCES.

Our American friends seem at last to have solved the difficulty of sending queens to Australia. Quite a number have reported to us the receipt of queens from Doolittle, Root, etc., in first-class condition.—Australian Bee-Bulletin.

SOMNAMBULIST'S TRIBULATIONS.

Did you ever manipulate a hive having a sort of "spare" upper chamber for the reception of the super? Quite recently I wrestled for more time than I care to tell, to release a super from such a predicament. Somehow every frame in that brood-nest seemed to have formed a remarkably close and strong attachment for that super, and I doubt not if I was longer effecting a separation of that union than many a court is in dissolving the bonds of matrimony. But by calling all my determination into play, the divorce between the two was eventually secured. But in straightening my bended form to give relief to my aching back, and baring my dripping face, wreathed in triumphant smiles, to catch a passing breath of air, my eye caught something else. There right before me stood a friend convulsed with laughter because of his having witnessed my superhuman efforts to free that super. After extracting all the fun from the incident possible, he remarked for my edification and consolation: "There's more useless and fraudulent traps made and sold to unsuspecting bee-keepers than can be found connected with any one other business. And you, as a class, have proven yourself truly American, inasmuch as you are delighted to be humbugged."

STICKY FLY-PAPER IN FOUL BROOD TIME.

As there is some doubt expressed in the "A B C" as to our being able to get all the bees, I will tell you how we did. We brimstoned them after night, and let the hive stay on the stand over the next day. Having the entrance corked tightly, we took a sheet of tanglefoot fly-paper and cut a hole in it over the corked entrance. This caught every straggler.—G. W. MARTIN, in Gleanings.

A VILLAINOUS PARAGRAPH.

From the compliments the Roots and Yorks have been paying one another, I was sure they were on extremely good terms, but on page 652, American Bee Journal, in an editorial, Editor York alludes to the folks at the Home of the Honey-Bees as "Rootvillians." Who would believe that Mr. York would be guilty of calling such names, and what could have upset the friendly relations that apparently existed between them? I want to warn Mr. York that if he ever has occasion to refer to my name, I don't want him to allude to me as a "Miller-villain."

FEEDING BEES IN COLD WEATHER.

On lifting up the quilts one sunny afternoon in February, I found the hives to be very destitute of honey; four or five out of the seven colonies I then had did not show a single cell of sealed honey. I knew then that I would have to feed, and that very shortly; but how and what to feed I did not know.

I went to H. S. Sutton, an old and successful bee-keeper, of whom I had bought my first bees the spring previous, and laid my case before him. He asked if I had any frames of honey; to which I replied I had not as much as one ounce of honey about my place, excepting what the bees had themselves, and that was very little. He told me to buy about eight or ten pounds of section honey for each colony, and to lay the sections flat on top of the frames, and to tuck the quilts and cushions in tightly to keep the heat from getting out, and let them alone. He said there would be honey enough in the under side of the sections to last them until it was time to take off the cushions and quilts some afternoon, and I could then score the top capping with a table fork, and put the hive-cover on and leave the quilts off awhile, and the bees would carry the honey down to their combs.

After getting the above directions, and a good lecture thrown in on the importance of seeing that bees have enough in the fall to take them through the winter, I went home to act accordingly.

I carried the above instructions out to the letter, and never had bees come out in the spring in better condition.—ED. JOLLEY, in American Bee-Keeper.

PREVENTION OF DRONES.

All our brood-combs are now built on full sheets of worker-foundation in horizontally-wired frames, and by the aid of our slatted top-bars all sagging is prevented and a scant ¼-inch bee-space is always maintained, hence no drone-cells can be stuck in extra corners, and we now have 50 or more colonies that, altogether, do not have enough drone-comb to fill a single frame. We have this season examined many 10-frame hives of Langstroth size where the combs had been built just as the common bee-keepers usually have them built, with starters or half-sheets of foundation, and we found our small, handy hives contained far more room for *worker*-brood than the larger hives as commonly used. Queen-breeders may need drone-traps, but for producing surplus honey I would not pay express charges on a quantity of the best traps yet invented. The honey-producer who is rearing drones that need capturing is not up to the first rank. Plenty of worker-brood foundation is the best investment he can make.—B. TAYLOR, in Review.

CELLARS FOR WINTERING BEES.

Many inquiries have come in for a cheap, practical wintering-cellar. A friend of mine some years ago built wintering quarters for his bees, that, while cheap, have given good results.

A hole 12x18 feet and 7 feet deep was dug on a dry knoll. On one end a slanting stairway was dug and wooden steps put in. A frame of 2x4 studding was set up inside the dugout and sided on the outside of the frame with inch sheeting. Begin at the bottom and place two or three boards on edge, and dirt that had been thrown out is packed between the boards and the dirt walls, and tamped quite hard. Several ties should be nailed temporarily across the frame in the center to keep the walls from being pressed together. The joists across the top will keep it straight there. When it is filled to the top of the first boards; put on two or three more and again fill as before, and so proceed until the top of the frame is reached. The frame had better be eight feet high and two feet above ground, so the dirt can be banked up snugly around it to shed the water and keep the cellar dry.

Set rafters with at least two feet projection at the eaves to shed the drip well away from the building. Cover with a good roof of sound boards, or better, shingles; lay a floor of loose boards on the joists above, fill in between it and the roof with dry straw or leaves. Make a stand of scantling 10 inches high around the outer walls to set the hives on. The doors should be at least two in number, one upright one at the bottom, and one sloping one at the top of the stairs to shed all water and keep the cellar dry.

Such a cellar will hold 100 colonies. It can be built for $30 for material, and a few days work. If the outside and edges of the siding are well coated with coal-tar before the clay is packed in, it will last 25 or more years, and be a first-class wintering-place. Where stone is to be had cheaply, it would probably be as cheap to make the walls of that material; it would last longer, but would have no other advantage over lumber.—B. TAYLOR, in Farm, Stock and Home.

Earn Your Own Subscription.—Any present subscriber can earn his or her own subscription to the American Bee Journal for one year by sending *three new subscribers*, with $3.00. A copy of "Bees and Honey" will also be mailed to each new subscriber, and the Bee Journal will be sent to the new readers from the time the order is received up to the end of 1896. This is an easy way to earn your own subscription and at the same time help to circulate the Bee Journal. Remember, getting 3 new subscribers pays for your own subscription for 1 year! Of course, no other premium will be sent in addition. This is a straight offer by itself.

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Shallow vs. Deep Frames for Wintering Bees.

Query 997.—1. Irrespective of the depth or shallowness of the frames, does the amount of comb which the cluster of a colony covers at the beginning of winter, if about four-fifths filled with honey, suffice for its needs, without the cluster moving lengthwise until the season enables it to do so readily?

2. Is there any essential contradiction between the maxim, "Deep frames are better for wintering," and the fact that colonies have wintered well in very shallow hives, such as the Bingham?

My idea is, that very shallow frames succeed when they are filled with honey, or nearly so, and deep frames succeed because they have enough honey in their tops, and that in neither case the cluster moves lengthwise in severe weather.—COLORADO.

Eugene Secor—I guess so.

G. M. Doolittle—I guess you are about right in your idea.

Mrs. L. Harrison—1. I should think so. 2. The season may make a difference.

W. G. Larrabee—1. I never noticed particularly, but I should think it might. 2. I don't know.

W. R. Graham—1. It is all-sufficient in this locality. 2. I would prefer deep frames for wintering.

Dr. J. P. H. Brown—If I understand the questions, the propounder of them has answered them himself.

Prof. A. J. Cook—My experience tallies with "Colorado's" conclusions. I never wintered bees better than in the Heddon hive.

C. H. Dibbern—1. I think so. 2. No, the severity of the weather, strength of colony, and the quality of the food have more to do with successful wintering than the shape of the hive.

P. H. Elwood—In long frames the cluster does move lengthwise in cold weather. In deep frames the cluster moves upward. It is better (safer) to move upward than lengthwise.

B. Taylor—1. I can make no intelligent reply to this impractical question. 2. In my cellar, shallow frames winter bees as well as deep ones. I see no reason why the cluster could not move lengthwise in either case.

Rev. M. Mahin—1. Yes, and no. It depends on the latitude, and the character of the weather. In some cases the honey in reach, if there were none *above* the cluster, would be all consumed, and the bees would starve. 2. I do not see any.

Chas. Dadant & Son—If the place occupied by the cluster, in a shallow hive, was filled four-fifths with honey, there would be no room for the bees either to breed or to cluster, as they do not like to cluster on the honey, probably owing to the fact that it is much colder than the empty comb. The back part of the hive would then be filled all the way down, and we would consider that the colony was running some risk, more so than a colony that had less honey under the cluster. In addition to this, we will say

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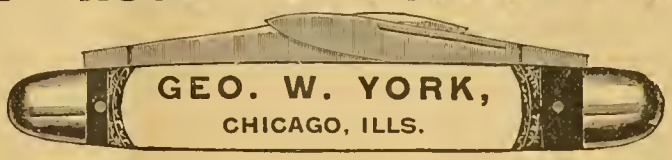

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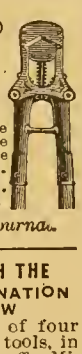

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that we do not believe that a colony can have a hive as full as mentioned above, and be strong, as the bees must of necessity have filled this space during the honey-flow, and there is usually about two months between that date and the opening of cold weather in which they breed more or less to keep up numbers. Bees in very shallow frames, with us, do not winter so well as in large ones, as a rule, and the fact that "they have wintered well" is not an evidence that they winter as well as in the deeper ones.

R. L. Taylor—1. The words "season" and "readily" are altogether too elastic terms to warrant one in giving a definite answer. As bees can move lengthwise of the combs without much difficulty at almost any time during winter, I venture to say yes. 2. No.

Dr. C. C. Miller—1. It is hard to tell. It would make a big difference whether "the seasou enables" them to fly weekly or be confined months. The thickness of the combs would also make another difference. 2. If the cluster never moves lengthwise in severe weather, and *does* move upward, then there may be a decided difference.

G. W. Demaree—1. That is a very indefinite way of measuring food-supply. A colony will occupy three or four times as much space on a warm day as they will on a cold day. If the brood-nest is large enough to accommodate (both in cold and warm weather) a fair-sized colony, and the combs are ¾ full of good honey, the bees will be quite safe.

J. M. Hambaugh—In long, continuous cold bees would not be able to change cluster sidewise, where, if there was an abundance of honey directly above the cluster, they can easily move upwards, hence the advantage of deep over shallow frames in a cold climate. Much depends, however, as to your bees' requirements in the shallow system you describe.

Rev. E. T. Abbott—1. That would depend upon the size of the colony and the length of the cold spell. The colony cannot move lengthwise in very cold weather. The cluster moves *up*, not *lengthwise*. 2. If there is not enough honey within and above the cluster to take the bees through the cold spell, they will die of starvation. Your idea agrees very much with my experience.

Allen Pringle—1. I am not sure that I understand your meaning in the first query, but I take it that you mean this: Is there sufficient honey or stores in the amount of comb the bees cover when they cluster to do them till spring, or such time as the temperature enables them to move readily? It is quite impossible to answer this question briefly, or without taking into consideration several conditions. If the bees are in a repository of proper temperature with other conditions right, and the comb is "four-fifths filled with honey," they would very likely have enough without moving till the middle or end of February. If, on the other hand, they are wintered outside, and not very well protected, they would doubtless have occasion to move for food before half that time was up. If wintered outside and protected by packing, etc., as they ought to be, so that the temperature inside the hive is about right, the same as in the cellar, then they would probably have enough to do them as long as though they were in a repository as above. Don't you see that your phrase, "until

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the season enables them to move readily," is very loose, because that time would vary greatly with the latitude, and the character of the winter, as well as with the repository and the degree of protection? Even in this latitude—say 44°—there are sometimes three or four spells during the winter when the temperature is such that the bees wintered outside with but little protection could readily move their position in the hive, while in other winters there would be no opportunity the whole winter through. The proper and safe way, however, to winter is, whether inside or out, to have the temperature of the colony such as will enable the bees to move for food when they need it, no matter what the outside temperature may be. 2. No. But as to your "idea" about the matter, there are several other factors.

J. E. Pond—1. This opens up a matter that would require more space to fully explain than can be devoted to the matter in these columns. 2. I don't just understand the drift of this question. I have not found deep frames better for wintering. To explain fully in regard to this matter would require quite an amount of space; in fact, would require a long article to explain so that the answer would be of any value.

E. France—We winter bees on the summer stands. For the Langstroth frames we use two sets of 8-frames, one set above the other. We want the upper set of 8 combs full, of honey preferred, no matter if the bottom set are empty. Bees need empty combs to cluster in—for out-door wintering—then have their food over the bees. Eight Langstroth frames *full* will do nicely. I would not like to depend upon shallow combs, say 4 inches. I think the bees would eat up to the top and starve in a cold winter, and leave feed in the ends of the frames.

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We have made arrangements whereby we can furnish the Finest **Basswood** or **Alfalfa** Extracted Honey, in 60-pound tin cans, on board cars in Chicago, at these prices: 1 can, in a case, 8½ cents per pound; 2 cans in one case, 8 cents; 4 cans (2 cases) or more, 7½ cents. Cash MUST accompany each order.

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Now it seems to us that here is a splendid chance for any bee-keeper to supply his home demand after his own crop is all sold. Or, why not begin now to create a local honey-trade? Order one 60-pound can first, and start out among your neighbors and friends, and see what you can do. You ought to get at least 15 cents per pound in 5-pound lots, or 50 cents for 3 pounds. Some may be able to do even better than that, though we think that enough ought to be sold at these prices to make a fairly paying business out of it. Give it a good trial. Push it. It may grow into a nice winter's work for you.

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WHY are so many persons blind to their own interests? A little thought will often save great trouble.

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WHY, when you know these things, reader, do you delay? There is no time like the present.

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Bee-Keeper's Guide—see page 751.

CALIFORNIA.

FOR SALE.—On account of being extensively engaged in the raisin and dried fruit shipping and packing business, I will sell on reasonable terms, my entire Planing Mill, Box Factory and Barley Mill, also my entire Stock and Trade of Bee-Keepers' Supplies. I sold 12 Carloads of Supplies in 1895.

Centrally located on the main line of the S. P. Co. R. R.

Also will sell 500 Colonies Bees in 10-frame L. hives, and Fixtures.

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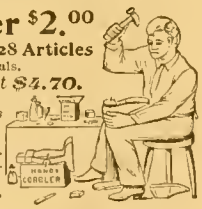

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CHICAGO, ILLS.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Oct. 16.—We never had as good inquiry for honey as this fall, and never sold as much. We have not received as good prices owing to the amount of California stock unloaded on this market, which was sold at a very low price, both comb and extracted. We quote: No. 1 and fancy, 13@15c.; amber and dark, 8½@11c. Extracted, 5@7c. Beeswax, 28c. J. A. L.

BUFAALO, N. Y., Oct. 14.—Honey is in good demand. We quote: Fancy, mostly 16c.; choice, 14@15c.; buckwheat sells slowly at 10@12c. Extracted very quiet. Will advance liberally upon all choice shipments of honey. Beeswax wanted at 28@30c. B. & Co.

CHICAGO, ILL., Nov. 7.—Comb honey, if fancy in all ways, sells at 15c., but the bulk of sales of white comb that grades No. 1 is sold at 13c. Amber or yellow brings 9@11c.; dark and brown, 8@10c., according to finish and flavor. There are large offerings of extracted at prices ranging from 4½@7c., according to color, body, flavor and package. Beeswax, 28@30c. R. A. B. & Co.

CINCINNATI, O., Nov. 20.—There is a fair demand for comb and extracted honey, with a good supply. Comb honey sells at 12@15c. for best white, in a jobbing way. Extracted brings 4@7c. on arrival. Beeswax is in good demand at 22@27c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, Mo., Nov. 21.—The demand for comb and extracted honey is improving. We quote: No. 1 white, 1-lbs., 13@14c.; No. 2, 12@13c.; No. 1 amber, 12@13c.; No. 2, 10@11c.; dark, 8@10c. Extracted, white, 6@6½c.; amber, 5@5½c.; Southern, dark, 4@4½c. Beeswax, 22@25c. C. C. C. & Co.

NEW YORK, N. Y., Nov. 8.—Demand for comb honey is very good, particularly fancy white, and is moving out about as fast as it arrives. We quote: Fancy clover, 1-lbs., 15@16c.; white, 13@14c.; fair, 11@12c.; buckwheat, 10@10½c. Extracted, buckwheat, 5@5½c., with supply equal to demand; white clover and basswood, 6@7c., with supply short and demand good; Southern, 50@55c. per gallon. Beeswax, 27@29c.; extra fancy, 30@31c. C. I. & B.

ALBANY, N. Y., Nov. 9.—Our honey market is in good shape, although prices, like on most all products, are not high; but receipts are lighter than last year, and there is a good, steady demand, with a real scarcity of white honey. We quote: White clover, 15@16c.; mixed clover, 12@14c.; dark clover, 9@11c. Extracted, white, 6½@7c.; mixed, 5½@6c.; dark, 5@5½c. H. R. W.

NEW YORK, N. Y., Nov. 22.—We have a good demand for white comb honey, all styles, and it finds ready sale at 14@15c. for fancy, and 12@13c. for second grade. The demand for buckwheat comb is rather limited and has fallen off considerably. The supply is large and the market shows a downward tendency. We quote: In paper boxes and glassed, 10c.; unglassed, 9@9½c. Extracted is not moving very fast and the supply is plenty, especially from California. We quote: White clover and basswood, 6c.; California, 5@5½c.; Southern, 50@55c. per gallon. No demand as yet for extracted buckwheat. Beeswax in good demand and firm at 29@30c. H. B. & S.

PHILADELPHIA, PA., Oct. 23.—Honey is selling freely, and good, choice comb sells on arrival. Pure Western extracted white clover sells very quickly and is in big demand. We quote: Fancy white clover, 16c.; choice, 14c., dark, 11c. Extracted, 5½@6½c.; pure white clover, 8@9c. Beeswax will not, in our judgment, advance much more, as it did last year, large quantities having been laid up at low prices. It sells fairly well at 26c. on arrival. W. A. S.

Binders for this size of the American Bee Journal we can furnish for 75 cents each, postpaid; or we will club it with the Bee Journal for a year—both for $1.60. We have a few of the old size (6x9) Binders left, that we will mail for only 40 cents each, to close them out.

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

List of Honey and Beeswax Dealers

Most of whom Quote in this Journal.

Chicago, Ills.

J. A. LAMON, 43 South Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 120 & 122 West Broadway.
CHAS. ISRAEL & BROS., 486 Canal St.

Kansas City, Mo.

C. C. CLEMOMS & Co., 423 Walnut St.

Buffalo, N. Y.

BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

Philadelphia, Pa.

WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

Convention Notices.

WISCONSIN.—The annual meeting of the Wisconsin State Bee-Keepers' Association will be held Thursday and Friday, Feb. 6 and 7, 1895, in the capitol building at Madison. The program will appear in due time.
Platteville, Wis. N. E. FRANCE, Sec.

IOWA.—The Central Iowa Bee-Keepers' Association will hold its third annual meeting at Oskaloosa, Dec. 26 and 27, 1895. This will be the largest convention held in the State this year; many of the best bee-keepers of the State are on the program and a good time is expected. All are invited. Other bee-papers please copy. W. EMMET BRYAN, Sec.
New Sharon, Iowa.

IOWA.—The third annual convention of the Central Iowa Bee-Keepers' Association will be held in the Farmers' Club room at Oskaloosa, Iowa, Dec. 26 and 27, 1895. An interesting program has been arranged. Holiday excursion rates. Good hotel accomodations at $1.00 a day. Come, and bring questions for the Question-Box. This is the largest convention in the State, and should be well attended,
W. E. BRYAN, Sec.-Treas.
New Sharon, Iowa.

CANADA.—The annual meeting of the Prescott Bee-Keepers' Association will be held in the Town Hall at Plantagenet, Ont., on Monday, Dec. 2, at 1 p.m. All bee-keepers and those interested in the production and consumption of honey are hereby cordially invited to attend.
The Russell County Bee-Keepers' Association will hold their annual meeting in the Town Hall at Rockland, Ont., the following day, at the same hour. Open to all.
Chard, Ont. W. J. BROWN, Acting Sec.

The Special Meeting of the Illinois State Bee-Keepers' Association will be held in Chicago, at the New Briggs House, northeast corner of Randolph St. and Fifth Ave., on Thursday and Friday, Jan. 9 and 10, 1896—the week of the National Cycle Show—when excursion rates will be given. Notice will be published later as to whether these rates will be on the certificate plan or otherwise. Chicago hotel rates are 75 cents each, per night, two in a room; $1.00 if one in a room. Meals extra—pay for what you order, or go elsewhere for meals, if preferred. JAS. A. STONE, Sec.
Bradfordton, Ill.

MINNESOTA.—The seventh annual meeting of the Minnesota Bee-Keepers' Association will be held at Minneapolis, Thursday and Friday, Dec. 5 and 6, 1895. Every bee-keeper is invited to be present and join the society; it will be the most important meeting ever held. If you have any question you would like to have discussed, send the same to me, and come prepared to help make the meeting interesting and profitable. The State Horticultural Society convenes on Dec. 3, and continues for three days. Every person interested in bees and fruit should attend these meetings. Take receipt from your station agent, that you have bought ticket to the Horticultural meeting, so as to get reduced rates. J. P. WEST, Pres.
Hastings, Minn.

A California Chance.—On page 769, H. M. Orr, of Selma, Calif., advertises a tempting chance to get a good, established business in California. Better write him, if you think you can swing it.

RAIL ROAD LANDS

For Sale at Low Prices and on Easy Terms.

The Illinois Central Railroad Company offers for sale on easy terms and at low prices, 150,000 acres of choice fruit, gardening, farm and grazing lands located in

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lying along and owned by the Yazoo & Mississippi Valley Railroad Company, and which that Company offers at low prices and on long terms. Special inducements and facilities offered to go and examine these lands, both in Southern Illinois and in the "Yazoo Valley," Miss. For further description, map and any information, address or call upon E. P. SKENE, Land Commissioner, No. 1 Park Row, Chicago, Ill.; or, G. W. McGINNIS, Ass't. Land Commissioner, Memphis, Tenn.

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Honey-Jars, Shipping-Cases, and everything that bee-keepers use. **Root's Goods at Root's Prices,** and the best shipping point in the country. Dealer in Honey and Beeswax. Catalogue Free.

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If you want first-class *FOR BUSINESS,* **ITALIAN QUEENS** **Foundation** at Wholesale Prices, **Hives,** suited for the South, or **SUPPLIES,** send for Price-List—to

J. P. H. BROWN, AUGUSTA, —GA.—

Golden's Feeder!

BEE-KEEPERS:—We can furnish the **Golden Combined Feeder and Hive-Cover,** without Feed Dish [as the Simplicity or any dish answers], direct from factory at the following prices: 1 made up, 30 cents; 1 in the flat, 25 cents; 10 in the flat, $2.00. All orders sent to The A. I. Root Co., Medina, Ohio.

For large orders, write the undersigned for special prices. **J. A. GOLDEN,**
45A13t REINERSVILLE, OHIO.

Mention the American Bee Journal.

Queens and Queen-Rearing.—If you want to know how to have queens fertilized in upper stories while the old queen is still laying below; how you may *safely introduce* any queen, at any time of the year when bees can fly; all about the different races of bees; all about shipping queens, queen-cages, candy for queen-cages, etc.; all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know—send for Doolittle's "Scientific Queen-Rearing"—a book of over 170 pages, which is as interesting as a story. Here are some good offers of this book:

Bound in cloth, postpaid, $1.00; or clubbed with the BEE JOURNAL for one year—both for only $1.75; or given free as a premium for sending us three new subscribers to the BEE JOURNAL for a year at $1.00 each.

General Items.

Short Crop—Bees in Good Condition.

My honey crop was short this year, though I have a plenty for home use. My bees are in good condition for winter. I have left most of the supers on the hives for winter. My bees did not swarm until August. C. V. MANN.

Riverton, Ill., Nov. 6.

Good Season Compared with Others.

My report for the season of 1895 is as follows: Spring count, 84 colonies; fall count, 102. Comb honey, 200 pounds; extracted, 3,500 pounds, and about 30 pounds of beeswax. I put the bees all in the cellar Nov. 4. The season has been good here, as compared with other seasons. But there is a great tendency on the part of a few bee-keepers to cut on prices of honey.

Chard, Ont., Nov. 15. W. J. BROWN.

A "Tonguey" Affair.

I believe there is one thing, Mr. Editor, in use by the rais—I beg Mr. Abbott's pardon—the *producers* of extracted honey that cannot be improved upon. I have to-day (Nov. 4) been using the Bingham honey-knife, and it seems to me to be about as near perfection as anything apiarian ever gets. It glides along under the cappings so easily, and is so easily adjusted to inequalities of surface, and leaves the cut surfaces so clean and nice, that I do not see what more can be expected of a honey-knife.

It has one fault, however, that I feel constrained to chronicle. When daubed all over with well-ripened nectar from white clover blossoms, it is a too-inviting thing to *lick*. The first time I got mine soiled (?) in this way, I felt an almost irresistible inclination to draw my tongue along the whole length of its surface, but remembering Hasty's experience on a similar occasion, I desisted. Then taking another look at the knife, I thought what a marvelous breadth of tongue Hasty must have, that it should sprawl over the two edges of a Bingham knife at one lick! Then I thought that by placing my tongue against the center of the knife near the handle, I could draw it along the center to the point, and so get a good lick without receiving any harm. Then the fear arose that my tongue *might* possibly spread out as wide as Hasty's. Then I desisted again.

At this writing my tongue is in working order. EDWIN BEVINS.

Leon, Iowa, Nov. 4.

Bees Did Well.

My bees did very well here this season. I do not see how I succeeded so well without the American Bee Journal. I think every one with even only one colony of bees should read the "Old Reliable."

Slaghts, Colo. W. H. PRICE.

Past Season in N. W. Missouri.

The season of 1895 opened here very dry, and remained so until the latter part of May, after which we had an abundance of rain until August, at which time another drouth set in, and still continues. I began the season with six colonies, two of them being mere nothings, having scarcely enough bees to cover two Langstroth combs; the remaining four were average colonies, from which I have increased to 18 good colonies, by natural swarming, and have taken off 250 sections of choice comb honey.

Fruit-bloom was very plentiful in the spring, and the weather being favorable, all colonies built up very rapidly. My first swarm came off May 2; swarming continued through May, but I had none in June. In July and the forepart of August swarming began again, owing, I think, to the large amount of buckwheat grown in this vicinity.

I can say, like Mr. Barber, of New York, that the 5-banded bees are ahead with me this year, my best colony having a 5-banded queen, gave me 100 well-filled sections of honey. This colony did not swarm, and were very strong all through the season. I cut out all cells but one after a colony has cast a swarm; of course, waiting until the 7th or 8th day after the swarm issues, and if well done, I am not bothered with after-swarms.

The fall flow was almost an entire failure, although all colonies were able to get ample stores for winter, and are in fine condition for wintering. GEO. H. CURL.

Darlington, Mo., Nov. 11.

Did Well, Considering—Honey-Plants

I think a great deal of the American Bee Journal. Taking the dry seasons into consideration, my bees have done well. I never had bees to build up so strong and fast, but the cold weather cut my white honey off, though I got, on an average, about 27 one-pound sections well filled from my 29 colonies, spring count, and the brood-chamber is full. Some are as much as I want to lift. It is all fall honey, but some almost white, or very light straw color.

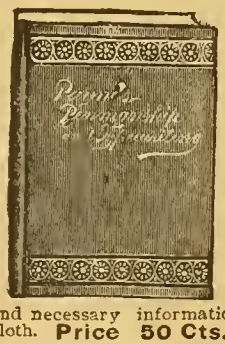
My bees had a rousing good fly yesterday. I am working a scheme here, and it is this: Mr. Lovesy, of Salt Lake City, Utah, sent me some Rocky Mountain bee-plant seed, and I raised a half pound. I also have crimson clover, sweet clover, mignonette, a little catnip, and white clover. I put 150 packages in little envelopes, and gave them away to all who would agree to plant them within three miles of my apiary. Next season I will put out a thousand packages of more varieties. People seem to take the seeds eagerly when I give then away.

EBB WATSON.

Redwood Falls, Minn., Nov. 15.

PAYNE'S

Practical Penmanship and Typewriting.



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Special Offer: We will mail this book free as a premium to any one sending us **one** New Subscriber to the Bee Journal for one year (with $2.00), and also send a copy of the premium book "Bees and Honey" to the new subscriber; or we will club the book with the Bee Journal for a year—both for $1.35.

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Foul Brood!

Don't destroy Colonies of Bees diseased by FOUL BROOD till you have read my Circular on the Cure of this destroyer of your apiaries. Circular sent free. Address,

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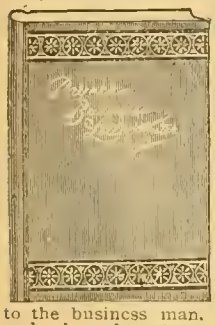

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35th Year. CHICAGO, ILL., DEC. 5, 1895. No. 49.

Contributed Articles.

On Important Apiarian Subjects.

Hive-Contraction—Wearing Bee-Veils.

BY O. M. DOOLITTLE.

A correspondent sends two questions to me, which he says he wishes me to answer in the American Bee Journal. The first is:

"To how great a degree shall we contract our hives when the surplus apartment is on?"

This is a question often asked of me, and perhaps a few words regarding the matter may not be amiss, even though the subject has often been discussed through the columns of this and other bee-papers. Undoubtedly I have practiced contraction as long, if not longer, than most persons in the apicultural pursuit, yet I do not practice contraction of the brood-chamber as soon as the sections are put on, as some do, for I hold that there is a proper time for this part of our work, as well as in all else we do; and this time is governed by the time our surplus comes in. If we contract too soon, we cut off the supply of bees that we must have to gather our crop of honey; and if too late, then we spend our crop of honey in rearing a useless lot of consumers.

I give the queen all the room she will occupy till the main honey harvest commences, when the brood-chamber is contracted down to about 600 or 700 square inches of comb space, according as a given number of frames make it. I usually use but six Gallup frames in time of contraction, which give 690 square inches of frame or comb space. These six Gallup frames would about equal five Langstroth frames, and were I using that hive (the Langstroth) I should use but five frames, when practicing the contraction plan. Sometimes I use but four, and often only five Gallup frames, this being governed by the size of the colony, contracting all to suit their numbers, so that the most honey may be obtained while the honey harvest lasts.

In taking away the extra brood, if a few bees are taken with it, and the hives in which it is placed closed tight for a few days, new colonies can be formed with it, or such can be used in forming nuclei.

Now, there is one thing that I do along this line of contraction that no one else practices, that I know of, still they may do so and I not know it. As soon as the harvest of white honey is over, I take off the surplus arrangement, take out the dummies, and fill out the hives with combs the same as they were when I was rearing bees for the harvest. This I do for two reasons, viz:

1st, honey has proven to be equally as good for my bees to winter on as sugar syrup, and on the whole I prefer it to the syrup; so if any honey is stored after this, it is in the combs where I want it for wintering purposes.

2nd, the enlarging of the brood-nest at this time gives me plenty of young bees for winter, and this is really necessary where the contraction has been closer than six frames. Six frames will give plenty of bees for winter, if the bees have not crowded the queen with honey; but as a general rule, there is nearly honey enough to winter the colony on where that number of frames has been used, with the Italian bees. In this case the empty frames are placed in the center of the hive, while if the frames are filled with brood they are placed on the outside. If brood is lacking, and it is getting late in the season, I frequently take the brood from the nuclei I made with it, when formerly taken away from the colony, and give all the brood the nuclei have back to them, using the nuclei in rearing queens, so that, when I get through queen-rearing in the fall, the bees of the nucleus have nearly all died of old age. In this way I get my bees in good condition for winter, having very little uniting or feeding to do.

THE WEARING OF BEE-VEILS.

The second question is: "In my work with the bees I wear a bee-veil, but a neighbor calls me a 'tender-foot' for doing so, and says that I will never succeed unless I throw away that veil. Do the successful bee-keepers wear veils, or not?"

A few of our fraternity seem to think that bee-veils can be dispensed with; but I think that the time has been in the life of nearly every one when a veil would have been a great consolation, if they would own the real truth in the matter. I can get along very well the most of the time without a veil, but occasionally I want one very much; and in order to have one just when I want it most, I generally wear one all the time when at work in the bee-yard. Besides the stings, I am of a peculiar nervous disposition, so that anything like something crawling on my neck when I am warm and sweaty, irritates me in the extreme, and even if bees never stung me I would wear a veil on hot days when extracting honey, to keep the young crawling bees and flies off my neck and face.

Then, again, there is a certain feeling of safety from the unexpected anger of bees that gives one great confidence when with the bees, that is worth more to me than all the rest. When my veil is on, I work with the bees with no more fear of stings than I would feel of being kicked by my faithful horse when cleaning him off with the brush; but as sure as I try to work with it off, I am on the lookout for what may happen, all the time. I have been stung very severely several times in my life, getting over 100 stings in less than a minute at one time; and when any one says it does not hurt to be stung I am inclined to think that person has a strange way of telling the truth.

The veil, as I wear it, is little if any in the way, for it is made throughout of bobinet sewed to the rim of an ordinary chip hat. I prefer a hat of this kind, all things considered, as the white color does not absorb the heat, and it is sufficiently firm to resist the wind to a better degree than a hat of any other substance and lightness. The bobinet which I use is that whose mesh is made in a hexagonal form, for this seems to obstruct the vision less than any other form, even though the square form of mesh may be much coarser.

To fasten around the neck, I throw the back part of the veil back over the shoulders as far as may be, then run each hand under the suspender in front, grasping the veil, when it is drawn with the hands out under the suspenders at the sides. This draws the veil out from the face all around, so it does not touch the person at all, leaves a free circulation of air, and is held as by a vise under the suspenders, if they are of the kind which have rubber in them.

Borodino, N. Y.

Every Present Subscriber of the Bee Journal should be an agent for it, and get all others possible to subscribe for it. See offers on page 754.

What Dr. Miller Thinks.

PAINTING HIVES.—That article on page 746 is a very important one if it is correct. Mr. Thomas seems to know what he's talking about, but one is inclined to ask whether there is no possibility of mistake in view of the fact that the general, if not the universal, practice has been to put on a priming coat. Can it be that during all these years there has been no one sufficiently honest and intelligent to give us the truth? In spite of the difficulty of explaining the matter, I incline to accept the teachings of Mr. Thomas as correct.

Now comes a practical question: Some of us believe that the bees are better off in hives without paint. Can we not take advantage of his teaching and oil all the bearings and joints? The hive first gives way and decays at those places, and if they are oiled well will not the hive last just about as well as if the whole hive were painted? So far as the bees are concerned, it will be an unpainted hive. But I think covers should be painted, and I come to this belief after years of experience with unpainted ones.

BEE-HIVES FOR FARMERS.—Referring to page 747, I do not know whether Mr. Langstroth said exactly what is attributed to him, but if my memory is not at fault, he did say something very much in that line—at least so far as to teach that some farmers would do better to use box-hives. Can any one tell us just what he did say, and where it was said?

REMEDY FOR ROBBING.—J. H. Andre, on page 752, recommends smoking the robbers till thoroughly drunk. I never tried it, so am not competent to say, but the question arises whether the robbers would not return to their evil ways when they got over their "drunk." If there should be a permanent cure effected, there is still the trouble that it can only be applied in cases in which we know where the culprits are. Sometimes that's very hard to find out, as they may be anywhere within an area of several square miles. Marengo, Ill.

How Can Bee-Keepers Best Improve the Winter Months?

BY HON. GEORGE. E. HILTON.

We live in an age of organizations, and through these organizations much valuable information is gained, and much pleasure is experienced. Bee-keeping is no exception to the many industries in this and other States. Many a man drops his old-fogy ideas and takes up something progressive as the result of his association with other minds.

Almost every State in the Union has a bee-keepers' association, and I wish I could say every county in Michigan had one. I felt this way 15 years ago, and my past experience has proven to me that I was right. At that time there were but few bee-keepers in Newaygo county, but I called that few together and stated my ideas and plans, and we organized the "Newaygo County Progressive Bee-Keepers' Association," and I was made its Secretary. We had frequent and very interesting meetings, and much valuable information was received and disseminated.

About three years later I became acquainted with the faculty at the Agricultural College. Learning that an occasional State Farmers' Institute was being held in the State, I made application for one to be held at Fremont during the winter of 1883, which was granted, and in February the first State Farmers' Institute was held in Newaygo county, and I think the first in the State north of Grand Rapids. We had with us Prof. Kedzie, Prof. Beal, and one other whose name I do not now recall; but we had a rousing time, and the largest hall in the village was filled. It was resolved at that time to organize a county farmers' association. I was elected secretary, and instructed to draft a constitution and set of by-laws to be adopted at the next meeting. This I did, and with the consent and recommendation of the Bee-Keepers' Association, recommended the name of the "Newaygo County Farmers' and Bee-Keepers' Association." This has been sustained ever since, and two State institutes have been held here in the meantime, and I am still serving as secretary.

But another change is about to take place along the line of progress. Under the new State law providing for farmers' institutes in every county in the State that will organize a society, we are about to merge this double-headed association into a State institute, and hold hereafter annual State institutes in our county, and have as many auxiliaries as we choose, and it is of these that I wish to speak in particular, for certainly every county in the State will provide for a State institute.

I have not written the above for self, but to show that "large oaks from little acorns grow." Now, I not only believe there should be a bee-keepers' organization in every county, but in every township, and through the winter months these township organizations should meet monthly at least, and semi-monthly would be better. At each meeting about two topics should be assigned, and the persons to whom they are assigned should write an essay designed to draw out discussion, and you who have not tried it will be surprised to learn how much you don't know. These township organizations should be auxiliaries to a county organization that should, in my opinion, hold its meetings in the spring before the busy season comes on, and in the fall, as soon as the busy season is over, and let these meetings be auxiliary to the State Farmers' Institute, that can be held between these meetings.

Aside from the information that may be gained from these gatherings upon the subjects under discussion, they are general educators. I know men and women (for I would have women eligible to membership in all these associations) who, a few years ago could not arise and repeat a dozen words without breaking down, can now make splendid talks. The Grange has done much in this respect, and where counties are well supplied with Granges, perhaps these organizations are not necessary; but many will become members in a special organization that are not members of the Grange, which I think is a mistake, for with my eight years' experience in the Grange, I think every farmer, his wife and children, should be members.

Now, I have but one object in writing this article, namely, that in counties and townships where no such organizations exist, steps will at once be taken among the bee-keepers to organize, and my word for it others will soon fall in line. And I know of no better way to improve the leisure time that so many have during the long, long winter months. If at any time I can give suggestions, or furnish any information, I shall be very glad to do so. I should also be pleased to be present at and assist in the organization of any county within one or two hundred miles of my home, knowing that I should be benefited thereby, and that the community composing the organization would never regret the little effort it cost them. —Michigan Farmer. Fremont, Mich.

Hunting and Locating Wild Bees.

BY N. T. SMITH.

Having read J. H. Andre's sketch on hunting wild bees (on page 697), I wish to tell my experience this fall. So far I have located 9 colonies in the woods, but the plan I follow is not like that given by Mr. Andre.

I have a box with a glass in the top, and a little "draw" fitted with a piece of comb at the bottom, midway between the comb and glass. There should be a thin slide to keep the bees above the comb while carrying them from one point to another.

I first find a bee on a flower, if I can; if not, I light a small fire, and by burning small pieces of old comb or beeswax, I draw bees to me in that way. Then take the drawer with the comb and let the bees settle on it, and then place it inside the box. Have a bottle of sugar syrup with just a scent of anise oil, put some on the comb, and when your bee gets filled keep your eye on her, for as soon as she gets out she will at once locate the opening in the box; next she will circle towards the tree or hive, coming back to the box to start to make another circle, or directly over it.

Now, after circling several times, each circle being larger, she will return and often start on a straight line from you, but not always; some times she will start for home when so far away that one needs good eyes to see her.

Now wait patiently until she returns, which will probably be from 6 to 10 minutes, according to the distance and the weather. If the colony is close by, there will soon be others following the first bee. (Let me add, don't start but one bee at a time till you become acquainted with the work.) When you can see them leave the comb and go without circling, then get a direct line marked by something you will remember; get some of the bees into the box above the slide, and carry them to some other location where your observation will not be broken by trees, and let your bees down on the comb, watching them as before till you secure a straight line from this point.

Now, all you have to do is to follow up this line until you come where your other line crosses, then look, and be sure you have your eye with you, for although to an old hand at it a colony of bees is very easily located, to a new hand it is a

very easy matter to overlook the bees and give up in disgust. I will give an experience of mine during the last of September. I had a colony working in the box carrying off syrup at a great rate, and as I had cross lines from three positions, nothing remained but the hunting part. But look as I pleased, I could not see the tree. Now, it happened that the woods was full of a small burr, and rather than follow the path I started to return to the box through a dense thicket of hazel bush, among which there were several heaps of other limbs and rubbish. As I got down on my knees to crawl through, I saw a small log just ahead, and made for it to walk on, when I was brought to a stop by what I thought then were yellow jackets, but what I soon found to be just what I was looking for—my bees. Some one had sawed the log off within 10 inches of the comb, and swung the end around to make a road past, during the last winter. There I could lie and look right in and see the colony and the combs capped to the edge with fine white honey. I have the log now standing in my yard, cut about 5 feet long, and filled 3½ feet with comb, making quite an ornament. This is the second colony of bees I have found on the ground.

I find much amusement in looking for wild bees, and great enjoyment in roaming in the woods, especially in the fall. Often I locate two colonies in one day, and at one place I located four trees that were not 20 rods apart.

I have 12 colonies to go into the winter with, several being swarms I found in the woods, and cut down the tree, transferred the honey to a hive, and put the bees on it again. I hope to get a start in the bee-business in this way.

Westoo, Ohio, Oct. 30.

Separating the Wax from the Honey in Cappings or in Broken Combs.

BY C. P. DADANT.

In the Question-Box, on page 755, I see, by the answers to the question asked, that most bee-keepers do not consider it of any importance to thoroughly separate the wax from the honey in rendering the cappings. There is quite a loss incurred in rendering the wax from drained cappings which have been thoroughly washed, and the fact that we often receive shipments of beeswax, which is sticky with honey, and attracts the bees to the wax-room, induces me to give our methods more fully than in the brief answer on the above-mentioned page.

We leave our cappings, after the extracting is over, as long as possible, in the capping-can. In the summer, honey will drain out of these cappings for weeks, and when drained in this way, the honey is of very good quality. But what remains sticking to the cappings, or to the few pieces of broken combs, which may happen to have fallen in with the mass of the cappings, may not drain out easily, and if pressed, or rendered out by heat, the honey obtained would be thick and dirty, resembling very much the cheap "strained" honey of Noah's time. To save the honey, we wash it out, by slightly heating the cappings in a large boiler, with water, over a slow fire. When all is warm, we put the cappings in a sack, dipping them out with a scoop, and press the sweetened water out of them till they are about dry. This sweetened water is then used for vinegar, by mixing it with cider or wine, which has already soured.

MAKING AND SELLING HONEY-VINEGAR.

To make first-class vinegar out of the cappings' water, the quantity used should be small enough that an egg will float at the top, showing a spot, the size of a dime, out of the water. If neither wine nor cider is at hand, the sweet water alone may be made into vinegar by keeping it in a warm place in an open vessel or in a barrel, the barrel to be filled only to about half or two-thirds, so the air may have a chance to act upon the liquid. A few crushed fruits, ripe fruits of any kind, even apple-parings, will help the fermentation.

Grape-juice, of course, will give it the best flavor. Much care must be used to have a clean vessel. Barrels must not have a musty smell. An empty barrel, in a farmer's cellar, is very often subject to suspicion, and it is better to throw it away than to spoil your vinegar.

Let the taste be free of all taint, and there is no reason why you should not sell this vinegar for a good price. We make, every year, from two to eight barrels of choice vinegar with the cappings' water, and a few unripe grapes. While the stores retail a vile stuff, made of who-knows-what, at 12 to 15 cents per gallon, we find no trouble in selling all that we produce at 30 cents per gallon, at retail, or 20 cents at wholesale. Our vinegar made in this way is so strong that most house-keepers "cut it in two" with water, so that it may not eat up their pickles.

This vinegar, we figure, costs us in the vicinity of 10 cents per gallon, or, in other words, we get about 10 cents per pound for honey that could not be sold in any other way. If there was an unlimited sale for choice vinegar, it would pay to make more of it.

Hamilton, Ill.

Bees Working on Alfalfa—Clipping Queens' Wings.

BY A. NORTON.

Regarding Dr. Miller's note in answer to question of H. P., about alfalfa, on page 667, I would say that perhaps the amount of alfalfa growing has much to do with the question of whether the bees work thereon. In California, wherever only stray and limited growths of it occur, so far as my own individual observation goes, bees are never seen working on it; but wherever it is grown extensively, as in other parts of the State, and portions of neighboring States, the bees work freely on it. I remember a statement I saw some years ago, by an Arizona bee-keeper, that even a field of alfalfa did not tempt the bees; but that, where it was grown on large tracts, it became their favorite.

I was glad to see Dr. Miller's attitude upon the question, Will clipping queens' wings ultimately cause the elimination of the power of flight? It hardly seems worth serious consideration, at least any reasons for thinking affirmatively on the question seem to me far-fetched. The eyeless fishes of caves, etc., have been there for thousands of years. Even if clipping could cause the breeding out of wing-power, it would doubtless take as long. In addition to the excellent reasons advanced by Dr. M., for thinking it cannot make any difference, this occurs to me:

Among certain species of ants, when the females fly out to meet the winged males, they often, after mating, drop near the homes of other ants, when they are seized by the workers and carried home. Workers are often out on the lookout for females at such time that they may, by kidnapping, increase their own prosperity. The females, after capture, are denuded of their wings. More than this, the females, after mating, have been observed to divest themselves of their wings. If this natural instinct is found in ants, it certainly has been there for thousands of years; and it is certainly shown that the complete loss of wings after some use of them cannot cause the elimination of wing-power.

Moreover, if we assume that such might be the case to any extent, any young queens that might be too deficient in wing-power would fail to mate, and would not perpetuate their kind. Only those queens whose wing-power was preserved could always propagate, and therefore flying queens instead of crawling will always be the characteristic. No doubt in the case of eyeless fish, etc., the organs were not merely useless, but became actually disadvantageous.

Monterey, Calif.

The Farmers' Institutes and Bee-Keeping.

BY J. W. ROUSE.

By the request of the committee, I attended the first of the series of Farmers' Institutes of Missouri, under the auspices of the State Board of Agriculture, held at Laddonia. This meeting was a good one, and very successful, having a large attendance, and good interest manifested. As there had been some prizes offered for the best display of corn, oats, pumpkins, potatoes, apples, butter, chickens, honey, etc., there was a very large display—something near 200 entries; and while the entries had to be necessarily in small quantities, on account of limited room to display them, they were of a character to do credit to any community or country.

I will not speak of every thing displayed, but wish to say that among the very fine display of apples there were some that weighed 21 ounces; five ears of corn that weighed 7 pounds and 1 ounce; beans a foot long; pumpkins that weighed 98 pounds, and watermelons that tipped the beam at 76 pounds.

The Institute at Laddonia was voted to be an annual affair. The writer did not arrive until after the meeting was already in progress some time, but was greeted with hearty hand-shakes. The speaker just then on the floor—Mr. T. B. Terry, of Hudson, Ohio—stopped his speech long enough to give me a cordial greeting. This made me feel very much at

home, as some of these men are workers that I have labored with in the institute work for the past four or five years.

I was specially requested to give a talk on bee-culture. The Board of Agriculture has not seen fit to have apiculture represented at the institute work this year, but some of the people want it any way, and so secure speakers of their own choosing.

On account of poor honey seasons here in Missouri for the past five years, there is not quite the interest in bee-keeping that there should be. I take the ground that all fruit-growers should keep at least a few bees, even if they never get any honey at all. I went into no technicalities, or grand display of words, to give a history of the honey-bee, but got down to practical instruction on how to handle bees to secure the best results as we have it to-day.

I have been at work on the management of our Agriculture College and Experiment Station, to have bee-keeping taught there. The Dean of the Experiment Station, Prof. H. J. Waters—a Missouri boy of which many of the State are very proud—has assured me that as soon as practical they will take up bee-keeping, and teach it at the Station. They already have about a dozen colonies of bees there, but some of them are in very poorly-constructed hives. I was at the Station last June, and examined the bees, and found some of them in good hives and good condition, while some were in such poorly-constructed hives that the surplus honey being stored was not in good condition to be removed from the hive.

I will not speak any more of the condition of the bees at the Station, but wish to say that to teach a class there, and to make practical manipulations with the bees before the class, so that the pupils could go to their homes and handle their bees, would be of incalculable benefit. I am in hopes the managers at the Station will get around to bee-keeping at an early date. Mexico, Mo.

The Production and Use of Beeswax.

BY JOSIAH GREGG.

All bee-keepers of experience know the origin of beeswax. It is simply the fat of the bee. Of its production by the bee I quote Prof. Cook, of Pomona College: "It is secreted by thin, membranaceous glands, just beneath the ventral segments of the abdomen. These glands take elements from the blood and form liquid wax, which passes through the eight wax-plates, and is molded into thin scales."

Wax, as produced by the bees and worked into comb, is almost pure white, but that which comes from the hive, on being melted and cooled, on the other hand, is of a yellowish cast. Honey and wax, two natural products, which, in their pure state, are obtainable from bees only, have, from the earliest dawn of human history, played a role of the highest importance in human economy.

The Bible mentions milk and honey as typical of all earthly blessings; the Greeks and Romans flavored their wine with honey; the ancient Germans prepared an intoxicating drink from it called mead. I have often made it myself; it is commonly called metheglin. And in a time when men had neither sugar nor syrup, honey served exclusively as a sweetening for their food and drinks.

Wax, on the other hand, was the only illuminating material for churches and the palaces of the rich, and for thousands of years the product of the bee had no competitor. But now it is all different. A whole list of substitutes may be mentioned, as paraffine, ceresin, and many vegetable and animal fats. And they may be so mixed by the help of modern science in chemistry as to resemble pure wax, and it is so well done that for all practical purposes, as for illuminating, etc., the compound may be considered as perfect. However, I will venture to say there is no substitute for the natural product of the bee; that is, for use in the apiary, for the manufacture of comb foundation.

To Detect False Wax.—Beeswax, due mostly to its high price, I am sorry to say, is adulterated to a great extent; more so perhaps in Europe, but to some extent in the United States. Mr. Mathey, in Gleanings for June 15, 1895, says that many European makers of foundation do not use the required amount of pure wax, but adulterate it with one-half or even two-thirds ceresin. Ceresin is a mineral wax made from petroleum.

So it becomes necessary that every bee-keeper should understand some simple method of detecting adulterated wax or foundation. The most simple test, and one which will answer for all practical purposes, is to chew a piece eight or ten minutes. If it crumbles it is pure wax; if not, it is adulterated.*

Solar Wax-Extractor.—I advise every bee-keeper who expects to make bee-keeping a business, to use the solar wax-extractor. It is cheap at a high price, even if he has but one dozen colonies, because it is cleanly and economical. All you have to do is to raise the lid and put in your pieces of comb and all the scrapings from the frames, or anything that has wax in it, and it will be melted into beautiful wax by the rays of the sun. No wood, no fire, no water. Old Sol does the work for nothing, and, best of all, you keep the wife in good humor. It is certainly the very best known method of rendering wax. Yet your wax will not be clear enough for making comb foundation, and it becomes necessary to clarify it.

My method is to use a tank made from two coal-oil cans soldered together. I put in a metal faucet about the center of the lower can. Fill with clear water till the faucet will be 1½ inches above the water. You can melt about 60 pounds of wax in such a tank, and when it is thoroughly melted take it from the fire and set it upon some elevated place, say a table, for convenience of drawing off into another vessel.

Comb Foundation.—As to the use of comb foundation, it would be hard to estimate its value; in fact it is the greatest invention of the age for the bee-keeper, and I would recommend an extravagant use of it, particularly in the brood-chamber, and in the supers used in extracting. In fact, extravagance in the use of comb foundation is economy. By the use of full sheets in your brood-frames, you insure straight combs and govern at your will the production of drones and for extracting-combs. They are tough, and will stand even rough handling, and are always convenient for interchanging in the brood-chamber, in feeding and for hiving new swarms. In fact, you can hardly estimate their value, and they will last for an indefinite time. With proper care they will last 20 years.—Read at the Visalia, Calif., Bee-Keepers' Convention.

[*Will Messrs. Chas. Dadant & Son please give their opinion of this test, and also tell us any other tests that they may feel like mentioning?—Editor.]

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Two Queens in a Hive.—"I have one colony that has an Italian and a black queen in it, both been laying and hatching young brood all summer, and seem to get along as well as twin sisters, each one trying to outdo the other in producing young bees."—Extract from a letter.

If there is no mistake, here is another illustration of the fact that it is not always safe to be positive about what bees will or will not do. If two queens will work harmoniously in one hive all summer, I see no reason why they should not do the same thing in a number of hives. Is it not barely possible that this condition of things occurs more frequently than is generally supposed? Had it not been that one of these queens was black and the other an Italian, perhaps the fact would not have been noticed. It may be that many of us have had a similar condition of things, and did not notice it, owing to the fact that the bees were all alike. Several times I have had two queens working together for a short time, but not "all summer." In every case which has come under my observation it has been a young queen and an old one, which was about to be superseded. I would be glad if this correspondent, who is a reader of the Bee Journal, would give us further particulars about these two queens.

How Long Will Honey Keep?—"Two or three years ago excavations were taking place on the site of an old house at Dresden, when some jars were discovered containing honey in perfectly good condition, which had been deposited there as far back as the 15th century."—Mr. Cowan, as reported in the British Bee Journal.

"If your honey is not first-class, make it so by *sterilizing*, or, in other words, heating, not enough to injure it, but so as to kill even imperceptible fermentation, and make it wholesome."—A. I. Root, in Gleanings.

If honey, after being buried for over 300 years, was found to be in "perfectly good condition," one would think that ordinary honey would not need much heating to "kill even imperceptible fermentation." Fermentation, of course,

is caused by the multiplication of germs, and it is my firm conviction that no germ will develop in honey, if properly handled, no difference how long it has been kept. The truth of the matter is, honey, as it comes from the hive, is a germicide, and this is what renders it valuable in the treatment of so many diseases. I am inclined to think that we would not hear of so much diphtheria and other forms of sore throat, if all the children of the land had plenty of pure honey to eat three times a day. I hardly think, however, that I would want to use the honey that needed to be "sterilized" in order to make it "wholesome." Honey that shows any hint of fermentation has been changed from its natural condition by bad handling, and should be consigned to the baker or manufacturer, for it has surely lost one of its most valuable qualities, that of being an antiseptic. That it is an antiseptic is evidenced by the fact stated by Mr. Cowan. The only thing that kept it good for over 300 years was its power to resist the attack of any unfriendly germs.

Mr. Root said in the same article, that Dr. Kellogg had found by recent experiments that diabetic patients could eat honey almost with impunity, while, as most people know, sugar would prove most fatal. I, myself, as I think I have said before in these columns, have been unable, on account of stomach trouble, for a long time to eat but little sugar, but during all that time I have eaten honey three times a day, when I could get it, without experiencing any difficulty. Mr. Root says he has had a similar experience. This is generally attributed to the fact that honey is grape-sugar instead of cane, and is, therefore, more easily assimilated. This may be one of the reasons, but I am inclined to think that the fact that honey contains an anti-ferment, or in other words, a germicide, is another reason why it can be eaten with impunity by many invalids, and in most cases with material benefit. Honey is not only a food, but is a medicine, distilled in Nature's best laboratory, and gathered and prepared by divinely-appointed chemists—the bees.

Among the Bee-Papers

Wintering Bees—A Symposium Condensed.

The following items are taken from a symposium on wintering, in Gleanings:

Were I asked what I have learned in recent years in wintering that is of importance I should say, *the value of having the size of every brood-chamber correspond with the size of the colony that is to occupy it.* Quinby, in "Bee-Keeping Explained," says that a small colony will consume nearly as much honey as a good-sized one; and when both are wintered in the same size of hive he is undoubtedly correct; but my experience has been that, when the brood-chamber is reduced to fit the colony, the consumption of honey during winter does not seem proportionately greater for the small colony than the large one. Nor yet do I find the loss greater of small colonies properly put up for winter than large ones.

My theory is, that if a good-sized colony should have eight frames, and 30 pounds of honey, a colony half its size will winter well on four combs and 15 pounds of honey. Of course after warm weather, and brood is maturing rapidly, the small colony will need more honey than the large one in proportion to its size, for it will mature brood almost as fast,—oftentimes.

Now, if it is such an avdantage for a small colony to have its hive reduced, would it not be a saving in honey to place a strong colony on, say, six combs? I answer no. They would be likely to consume even more honey than if left properly packed upon eight combs. The strong colony is liable to be overwarm and restless, and to rear a large amount of brood in winter, thus wasting its stores and vitality both. So I use the division-board freely, and have brood-chambers of all sizes from four to nine or ten Langstroth combs, and I have wintered very small colonies upon three combs with entire success—J. E. CRANE.

After the middle of November, on a cool, dry day, my bees are taken in and stacked up four hives high on a foundation of scantling. I leave on the bottom-boards and honey-boards; but I like the idea of placing a two-inch rim, size of hive, between bottom and body, except in case where a very shallow frame in a single story is used.

Ordinary cellars do not maintain an even temperature; at least, my cellar does not; so I keep close watch, especially during changeable weather. By opening or shutting the window I can regulate the temperature pretty well—enough so that I have been able to winter my bees in this cellar for ten years with very little loss. About April 10, or when the bees wintered out-of-doors begin to bring pollen, I take all colonies from the cellar, and do this during the night. In placing them on their stands I pay no attention to their former location the fall previous.

Upward ventilation through five or six inches of chaff has proved much better than a sealed cover for outdoor wintering.

A very shallow frame (half-story frame) in a single story has given me best results in the cellar, which I explain as follows: In so shallow a brood-nest the cluster of bees touches top and bottom. Any bees, when about to die, cannot accumulate, but leave the hive and die on the cellar-bottom, which should be covered from time to time anew with dry saw-dust. Purer air is thus secured to the colonies, and combs remain sweet. I have never as yet found a moldy comb in these shallow hives.—F. GREINER.

I believe thoroughly that outside packing pays. My favorite method is to pack four colonies together. During the summer the hives are in groups of four, two facing east and two west. They are far enough apart to allow of working all around them easily; but on the approach of winter they are moved close together. A large box (or, rather, a rim) without top or bottom is then placed around them, the ends resting on the "bridges" over the entrance so that the bees may fly undisturbed, the sides resting on the ground. The sides and ends are seperate panels, which are lightly tacked together at the corners, just before they are set into place. The four hives are now about two inches from each other, with a space of three or four inches all around the outside, and six or eight inches over the top.

I generally use planer-shavings for packing. Leaves of the softer varieties are good; but I would not use chaff or straw, as the grain they are apt to contain is an attraction for mice. The whole is covered with a good roof—one that will not leak or blow off.

The hives are covered with a flat board cover, and this is left just as it was during the summer.—J. A. GREEN.

CHANGING STORES.

If our bees get improper food into the hive it becomes a serious matter to change this for the proper kind, for experience has taught that there is a right and a wrong way to do even this. Changing the frames of poor for frames of good honey is all right if thoroughly done early enough in the season so that the bees can arrange themselves for winter; but to wait until almost time to put them away for winter, and then take out a few outside frames and put in the others does but small good, for the bees have arranged a winter supply around the brood-nest, and it is a chance if your good honey is touched at all for the bees will be dead long before they get to it. Then why not put it in the middle? By this you have divided the bees and changed all their winter arrangements. A neighbor of mine last fall, when our bees all got much honey-dew, took all the honey he could get from 80 colonies, and had to leave 40 with the honey unchanged. In the spring, those undisturbed came out as well as the others, although the best of basswood was substituted for the honey-dew. From this we draw the inference that the only practical way is to remove the honey next to the brood-nest, put in empty frames, and then feed with some kind of a feeder. This gives them a chance to arrange the food in what *they* call the right place. Then arrangement of stores is important. Yes, but not essential. If proper temperature be given, the bees will go to the honey if it is in the hive, whether it is above or at the side or end of the cluster. I have experimented along this line with frames from 5 inches deep up to 19 inches; and, other conditions being right, it made no difference. Sugar stores are all right for winter if fed early, and good sugar is used.

VENTILATION OF HIVES.

Top or bottom ventilation of hives has been a vexed question with me, and I am not sure on this point now, but I have come to this conclusion: If much bottom ventilation is given, but little at top is needed; and if much at top, but little at the bottom. I am inclined to a large opening at the bottom and none at the top, for the reason that it seems to preserve the natural heat of the cluster, and at the same time allow all the dead bees to fall away from the combs, and thereby avoid foul air and contamination by mold and decay. I have practiced leaving the bottom-boards off entirely, and setting the hives so as to have a space of about eight inches wide the whole length of the hive clear, and leave the quilt and cover on; also the honey-board, if the hive had one on in summer.—C. A. HATCH.

VENTILATION.

Ventilation is necessary both to control the temperature and to maintain the purity of the air. The heat of the earth is the main dependence for controlling the temperature of cellars; but with a cellar fully stocked with bees, resource must be had to ventilation. At no time, no matter how cold, can we close all ventilation to our cellar without causing a dangerous rise in temperature. Again, when we have a very warm spell of weather we find it necessary to throw open all ventilators at night, including doors, and partially close them in the morning. Sometimes the temperature does not fall much in the cellar; but we find the bees quieter in the morning in the pure air. Sub-earth ventilation, if well put in, is useful at such times; but with a cellar only partially stocked with bees it can be dispensed with.

Ventilation for maintaining the purity of the atmosphere has been a disputed point; but during the last few years it has been so generally accepted by intelligent bee-keepers that but few remain to dispute it. The necessity for such ventilation was abundantly proven many years ago; but so many had wintered successfully without any provision for change of air that it was thought some mistake had been made by the claimants. It is now generally admitted that the mistake was made by those who did not admit the claim, in overlooking the factor of natural ventilation, which, in many repositories, is abundant for the number of bees kept in them. By natural ventilation is meant the change of air taking place through the crevices and materials, such as wood, mortar, brick, and stone, of which the building may be constructed. For fuller account of natural and artificial ventilation, see American Bee Journal, page 233, 1878.—P. H. Elwood.

After the bees are all in the bee-house I leave the doors and windows open, giving abundant ventilation and the full light of day until the weather becomes quite cold. By this means the temperature is kept well down, say below 40°. I prefer that the temperature should not be much above this until there are pretty evident signs of brood-rearing toward spring, which will be shown by increased activity of the bees.

After brood-rearing has commenced it is very important that the temperature be kept pretty well up, saying 50° to 55°. A low temperature at this time, if long contained, is almost certain to produce unfavorable results. It is at this time that artificial heat plays an important part in regulating the temperature of the bee-house, which is a factor in wintering bees that I could not think of dispensing with; in fact, it grows in favor with me each year, and I would not think of constructing a bee-house without arrangements for this purpose. I never use artificial heat directly in the bee-room, but in a room adjoining. This makes the warming so gradual in the bee-rooms that the changes of temperature are almost imperceptible to the bees, and causes no disturbance.

UNITING.

There is no time when colonies may be united with so little trouble as when set out of the bee-house in spring. It is unnecessary to give any attention to the queens. I unite at this time by placing one hive on top of another, using the best combs on top, as the colony will eventually occupy the upper story. I have had both queens continue laying in such united colonies until swarming time.—H. R. Broadman.

One of the things I have found out in recent years is, that we must have plenty of young bees to begin winter confinement with. From Dec. 1 to April 1 is five months. Bees, as a rule, entirely stop breeding here by Oct. 1, and do not rear much brood before May 1. This is *seven months*. I do not believe workers live much longer than this under the most favorable conditions. Bees hatched in August will be nine months old to reach May 1. I have had the most positive proof in the last two years that they can not be made to live so long by any known skill or perfection of food or quarters. Some claim that bees live very long when idle. I do not believe that men or animals that follow nature's demands as to work, shorten their lives thereby. I have observed that loafers do not live longer than the industrious who lead a just and temperate life. I expect to live an active life while I can walk, and I do not expect to lessen the number of my days thereby.—B. Taylor.

About Nov. 20, the bees are placed in, about 18 inches from the ground. The back end of each hive stands three inches higher than the front. I pry up the back ends and slip in ⅜-inch bits of lath. I leave the cloth, covered with propolis, flat on top of frames. I like it sealed down air-tight. A chaff cushion is placed on top of each hive. To keep the hives at the proper pitch, a piece of lath is laid across the lower end of each hive on top of the cushion, before placing the next hive on. The walks, to prevent crushing bees, are made of boards, across which are nailed strips ⅜x1 inch. These strips are nailed one inch apart, with edges up. The floor is natural earth, worked down hard and smooth.—S. T. Pettit.

It is very encouraging to note, as one reads over this series of very interesting articles, that the "wintering problem" is not such a serious one as it formerly was; indeed, it may almost be said to be solved if we may judge from the unbroken records of success of not alone the few who have given us their views, but of the hundreds of bee-keepers all over our north lands where winter's rigors hold full sway.

Not all of the writers above follow exactly the same methods: but it is significant that they agree on all important essentials.

These, primarily, seem to be—good bees of right age; good food, and suitable protection. As to food, granulated-sugar syrup fed early enough to be well ripened seems to hold the first place; after that, good light honey. For protection all are agreed that outdoor colonies should be packed in double-walled hives, and that those indoors should be in a frost-proof room, generally under ground, darkened, and capable of good ventilation. It seems to be easier to control temperature in the cellars than in the upground structures.—Editor Root.

Canadian Beedom.

Do Bees Ever Go to Sleep During the Working Season?

There have been many discussions on the question, "Do bees hear?" and I think it is now generally conceded that they do. I never for a moment suspected that they were deaf, but I have often wondered whether bees ever sleep during the working season, and have never been able to satisfy myself that they do. I have examined glass observation-hives at all hours of the night, but always found their inmates busy and active. That great naturalist, and eminent bee-keeper, Huber, said that he observed frequent instances of bees placing their heads in empty cells and remaining perfectly motionless for from 15 to 20 minutes, in his opinion evidently asleep. Von Berlepsch reports having repeatedly observed similar phenomena, both with workers and queens—not with drones, but then says he, what is the whole life of these but sleep? and he considers there can exist on the point no doubt whatever. "The more active the bees are," he remarks, "the more will they sleep like every other creature." It is an old proverb, "Catch a weasel asleep;" and I have never been able to catch a bee asleep during the working season.

Clipping Queens' Wings.

In the October number of the Bee-Keepers' Review, Mr. Hasty says:

"The conductor of the Canadian department sails into the habit of clipping queens' wings, on page 495. I'm quite willing to 'hold his bunnit' if he finds it at all warm on his head. Says he regards a queen with the same sort of enthusiasm that he regards a beautiful woman, and could no more look with pleasure on the former in a mutilated condition than he could endure seeing the latter trying to be graceful with an amputated arm. The argument about prospective harm to the race of bees may not amount to much, perhaps; but my stumper is that the disgusting practice makes more trouble than it saves."

Toads in the Apiary.

The American Agriculturist for Nov. 16, contains the following:

"Toads a Nuisance in the Apiary.—One day last summer I noticed a large, plump-looking toad sitting on the alighting-board in front of one of my hives. Watching him a few minutes, I saw him take in a bee, and within another minute another one. To investigate the matter further, I took Mr. Toad to the woodpile and cut his head off and pro-

ceeded to make an examination of his stomach. To my surprise I found that it contained 46 bees, which, to judge from their appearance, were all taken in that same morning. I have kept bees for the last 35 years, but this is the first time I have seen toads catch them.—T. BAILEY."

It seems strange that any one could keep bees for 35 years without finding out that toads are among their most deadly enemies. But they operate very stealthily, and have a way of darting out their tongues with lightning-like rapidity, so that without close and careful observation their true character may easily be overlooked. On this subject, a rhyming bee-keeper has written as follows:

I set my hives two feet above the ground,
Where ease of handling them is always found.
The man who first devised a four-inch stool
To set his hives on was an arrant fool,
And needlessly condemned himself to stoop
Till with fatigue and pain his spirits droop.

Why set your bees away down near the ground
Where damp, foul air, vermin and toads abound?
Some say because the heavy-laden bees
Can gain the entrances with greater ease,
While higher up their foothold they may miss,
And Mother Earth's cold bosom often kiss.

Well, I have watched the honey-laden bee
Returning home, and I could seldom see
Failure to gain the alighting-board, but in
They hasten, and home's glad enclosure win.
For one poor, weary, heavy-laden bee
That prostrate on the ground, tired out, you see,
I'll point you out a dozen with their load,
Caught by the lightning-tongue of some big toad.

Beside the hive he squats, and there prepares,
Apparently, to say his evening prayers;
He looks so solemn, grave, demure, devout—
But wretched hypocrite and graceless lout,
He knows too well the mischief he's about,
And catches bees quicker than you can shout
"Jack Robinson!" or any other thing—
Regardless of the poison and the sting.

So keep your hives well up a foot or two,
For it is good both for your bees and you.

Honey Thieves.

On page 739, 26 practical bee-keepers discuss the subject of "Catching an apiary thief." Many advices are given, both wise and otherwise, but not one has alluded to the only measure I have found thoroughly effectual, namely, a house-apiary. Before adopting this plan of keeping bees I was robbed of honey several times, and usually the marauders, not content with stealing honey, destroyed the bees and bee-hives. But since my bees have been domiciled in a bee-house, the door of which is kept securely padlocked, I have had no trouble of this kind. This is a better plan than keeping Cyprian bees and bulldogs on the premises, setting spring guns, trying to curry favor with thieves by sending them presents of honey, or catching them by the coat-tails or whiskers—all of which, together with other devices of questionable propriety, are suggested by one and another.

Making Hives by Hand.

It will soon be time to begin getting ready for another season, making hives, supers, stands—in fact, anything you will need around the apiary.

I have always made my own hives by hand, and think it will pay any one who is at all handy with tools to make his hives in the winter when he is not very busy. Before commencing, there are a few things that may be made very easily, which will be a great help to you when you do get started.

The first thing, of course, is to have saws, planes and chisels in good condition; then if you intend to halve the corners, make a gauge from two pieces of lath, or something a little wider; leave them as long as the hive is deep, nail one flat on the edge of the other, so that when you put the hive-end in the vise, after planing it, and marking it an inch shorter at each end, you can run a pencil along the edge of the gauge, and just leave half an inch; rip this down, and saw it across. I generally nail a straight edge along the mark, as it is a hard job to saw in the flat side of a board. Now, if you have the sides squarely cut, you will have little or no trouble in nailing.

Next you need a mortise-box to saw the stuff for the frames. Make it about 5 inches wide, 4 inches deep, and two feet long; cut a saw-kerf 5 inches from one end of the box, and be sure to get it square; then nail a little block at one side for a stop, so that you may place a strip ¼x⅜ against it, and cut off an end-bar every time, and have them all exactly the same length. Put another stop on the other side for top-bars, and nail the box to the side of a bench.

I also use a small sort of box for taking the ends out of top-bars. It is made from strips of hard wood 6 inches longer than the top-bar, 1 and 1 6-inches wider than the top-bar. The second is nailed to the edge of this, and is 1 inch thick and 3 inches wide. The third is ⅛-inch thick by 1⅛ wide; this is nailed on the other edge of No. 1; set this on its end in the vise, place a top-bar in it, get a saw-kerf in the right place, and it is complete.

Now you want a nailing-block to put the frame together on. This is made of a good solid piece of board, hard wood is preferable; leave it 2 inches wider and longer than the frame; screw on a strip, also hard wood, at each end, leaving room for the length of the frame between. These should be a little shorter than the end-bar, so as to leave room for the hammer to drive the nails, then nail two more strips where the bottom-bar should be, one on each side of it. The bottom-bar goes between the end-bars, and the ⅞, or 1 inch top-bar, is halved onto them. With this nailing-block the frames are all square and exactly the same size, and by having the stuff ripped out the right width, and sawing it the right lengths in the mortise-box, you can soon make a lot of good frames. Use 1¼-inch wire nails for nailing, and make the bottom-bars ⅜x⅜, as the bees build better to a bar of this size.

If you make flat covers, mark them in from the edge 2 inches all around, and bevel down to ⅜ of an inch; saw the ends. This style of cover does not warp nearly so badly as the common flat cover.

GEO. MCCULLOCH.

Harwood, Ont.

Coal Tar and Phenol.

Phenol is one of several products obtained from coal tar, concerning which the London (Eng.) Daily News gives the following interesting item of information:

"Writing about that marvellous color-producer, coal tar, a writer in Longman reminds us that it is only 36 years ago Pekin 'gathered up the fragments' in coal tar and produced the beautiful mauve dye. Now, from the greasy material which was considered useless is produced madder, which makes coal tar worth a hundred pounds a ton. This coloring matter alone now employs an industry of £2,000,000 per annum. One ton of good cannel coal, when distilled in gas retorts, leaves twelve gallons of coal tar, from which are produced a pound of benzine, a pound of toluene, a pound and a half of phenol, six pounds of naphthalene, a small quantity of xylene, and half a pound of anthracene for dyeing purposes. According to Roscoe, there are 16 distinct yellow colors, 12 orange, 30 red, 15 blue, 7 green, and 9 violet, besides a number of browns and an infinite number of blendings of all shades."

The Alsike Clover Leaflet consists of 2 pages, with illustrations, showing the value of Alsike clover, and telling how to grow it. This Leaflet is just the thing to hand to every farmer in your neighborhood. Send to the Bee Journal office for a quantity of them, and see that they are distributed where they will do the most good. Prices, postpaid, are as follows: 50 for 25 cents; 100 for 40 cents; or 200 for 70 cents.

The Names and Addresses of all your bee-friends, who are not now taking the Bee Journal, are wanted at this office. Send them in, please, when sample copies will be mailed to them. Then you can secure their subscriptions, and earn some of the premiums offered on page 754. The next few months will be just the time to easily get new subscribers. Try it earnestly, at least.

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

☞ See "Bee-Keeper's Guide" offer on page 784.

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Editorial Budget.

The International Bee-Congress closes its sessions to-day, at Atlanta, Ga. It is expected that a full report of the proceedings will appear in the "Southern Department" of the Bee Journal as soon as possible.

Mr. Hasty, who writes so interestingly for the Bee-Keepers' Review, is a composer of some very excellent hymn-tunes—regular Gospel songs that have the true ring. Dr. Miller, it seems, has just recently learned the above concerning Mr. Hasty, and notes it in a "straw" in Gleanings.

The California Convention Report will appear in these columns next week. At the meeting held Nov. 18 and 19, a "California Honey Exchange" was formed. This will be of great interest to honey-producers on the Pacific Slope. Prof. Cook, as President, and Mr. J. H. Martin, as Secretary, were re-elected.

A Symposium on Wintering occupies 10 pages of Gleanings for Nov. 15. In his recapitulation of the eight different articles on the subject of wintering bees, Editor Root says that "it is significant that they agree on all important essentials," which, primarily, are, "good bees of right age; good food, and suitable protection." Further reference to this symposium will be found on page 777 of this number.

Mr. J. W. Rouse's Address on "Bee-Culture," at the Farmers' Institute held at Laddonia, Mo., received very favorable mention in the local newspapers. One said: "Mr. Rouse fully sustained his reputation of being one of the most practical bee-keepers in the State, and at the same time made one of the best speeches delivered before the Institute. It was listened to with great interest." Mr. Rouse has an article on page 775 of this number, referring to the Institute work in Missouri.

Winter School of Agriculture.—The University of Illinois has arranged for a special term of school which is of great interest to farmers. It will begin Jan. 6, and end March 25, 1896. Tuition free. It is for the benefit of such as are mostly interested in the business side of agriculture, and to whom a knowledge of agricultural facts and practices is of first importance. For further information and particulars regarding the Winter School of Agriculture, address, Eugene Davenport, Dean of the College of Agriculture, Urbana, Ill.

Nomenclature of Bee-Culture.—In a recent number of Gleanings Dr. Miller said this:

"Germans are sometimes prodigal of words, but in one case at least they are more economical than we. Instead of saying a plant 'yields honey,' they just say the plant 'honeys.' I wish we had such a verb."

Editor Root then followed the above with this comment:

"Bee-keepers, or, rather editors of bee-papers, might do much at simplifying our nomenclature, without offending good taste or obscuring the meaning. For instance, Langstroth recommends the words 'queen' and 'unqueen' as verbs; and S. T. Pettit would use 'floor' instead of bottom-board, and 'bar' instead of perforated metal. Gleanings will be glad to assist."

While I think bee-culture is freer from imperfections in its nomenclature than any other pursuit of equal importance, I am ready to help along in the line suggested by Dr. Miller and Editor Root. But I fear "bar" would hardly be explicit enough to indicate "perforated metal." "Hive-floor" for "bottom-board" would be a little clearer, though not very much shorter. "Queen" and "unqueen" are good. The Bee Journal is ready to co-operate in making improvements along the line indicated. But just now it thinks of no other important changes to suggest.

Three Questions—Please Answer.—Before Christmas (Dec. 25, 1895) there probably will be several thousand of the Bee Journal subscribers who will renew their subscriptions for 1896. Now, I would like all of them (and any who have already paid for 1896), to kindly reply to the following questions, as the answers will be a help to me in more satisfactorily conducting the Bee Journal in the future:

1. What department would you like to have more of?
2. What department would you prefer less of?
3. What have you to suggest that you think would be an improvement in the contents of the Bee Journal?

You can answer simply by number, without writing the question. Please do so on a separate sheet of paper from anything else you may write, as I wish to file the answers by themselves. Your responses are for my *private* information, and will be gratefully received.

I hope all who expect to read the Bee Journal during 1896 (and I trust that will include *all* who *now* read it), will feel free to answer the three questions I ask above.

A True-Blue Bee-Keeper.—The following letter contains such a genuinely kind and true spirit, that I feel it should be published in full, so that others, who are similarly situated, may be inspired to "go and do likewise:"

GEORGE W. YORK & Co.—*Dear Sirs:*—Please find $1.00 to pay for the American Bee Journal for 1896. I had no honey, and had to feed my bees 1,100 pounds of sugar to get them through the winter, and I felt so poor that I thought I could not afford the Journal. Then I thought, "What would become of our American Bee Journal if all the men who had a honey-failure should stop the paper?" Then I said, "It will not do; we must pay up." Yours truly.

Fairwater, Wis., Nov. 25. R. K. McCUNE.

Thank you, Mr. McCune. I assure you I appreciate the generous and self-sacrificing sentiment of your letter. Having such friends, I don't see how the American Bee Journal can but go grandly forward. Oh, for ten thousand that could feel as you do! Verily, you will be rewarded for your faithfulness and devotion to bee-keeping and its literature.

The Illinos State Convention.—Last week I promised that in the next number I would give some notes and incidents relating to the convention held at Springfield, Ill., on Nov. 19 and 20.

Well, Dr. Miller and I left Chicago Monday evening, Nov. 18, at 9 o'clock, going on the Illinois Central railroad. We

arrived at Springfield at 5:30 the next morning, very tired and sleepy. (No sleeping-car is run to Springfield on that line.) We proceeded to the various hotels, hoping to discover where the head-quarters of the convention were to be. But finding no familiar names on the hotel registers, we began to investigate the restaurants, where we replenished the inner man, and then waited until about 9 o'clock, when we went to the State House. This is a beautiful structure, massive and substantial, and costing about $5,000,000.

The convention was held in the Senate Judiciary room. There was not a large number present, but all who were there took a very active part in the various subjects discussed. Pres. J. Q. Smith being absent, Vice-Pres. S. N. Black called the meeting to order. Mr. Smith was on hand at the afternoon session, and all through the remainder of the meeting. Both Mr. Smith and Mr. Black are good presiding officers, and did their share in making the meeting a success.

Col. Chas. F. Mills addressed the convention in a very pleasant manner immediately after the opening prayer by Rev. A. P. Cobb, the popular pastor of the Christian church. Mr. Mills welcomed the convention to Springfield, and outlined the work of the Farmers' Institutes that are to be held in each county the coming year. He assured the convention that bee-keeping would receive a prominent place in all the programs, and expressed the hope that bee-keepers in every county in the State would do all they could to aid the managers of the Institutes in securing able persons to properly present the subject of bee-culture.

Secretary Jas. A. Stone was on hand, and attended to his duties in his usual efficient and businesslike way. Mrs. Stone was in attendance the second day. The convention was indebted to her kind thoughtfulness for a market-basket full of delicious Sangamon county apples, which were "passed around" until only the basket was left.

Mr. C. P. Dadant—always good-natured and cheerful—was present, and contributed much to the interest and profit of the meeting.

Mr. W. J. Finch, of Springfield, is one of the youngerly men, who is now doing what he can to "sweeten up" the residents of that town. Besides his comb foundation business, he is endeavoring to build up a local honey market, in which he is succeeding also. Mr. Finch informed me that at the State Fair at Springfield in September there was the finest and largest apiarian exhibit they have had for years—about 5,000 pounds of honey being shown. Some $300 in cash premiums was offered. Besides the exhibitors from this State there were Mr. O. L. Hershiser, of New York, and Geo. H. Kirkpatrick, of Indiana.

Among the others who took an active part in the convention discussions were, Mr. Geo. F. Robbins, of Mechanicsburg, and Mr. Chas. Becker, of Pleasant Plain. Mr. J. M. Hambaugh, who heretofore had been the President and one of the hardest working members, was greatly missed. He has within the past year removed to Escondido, Calif., only a few miles from the southern border of the State. Of course he is keeping bees there.

Tuesday evening, there being no session of the convention, several of us had the pleasure of listening to Mr. George Kennan, the lecturer on Russia, Siberia, Arctic Asia, etc. It was a rare treat.

During our stay in Springfield we stopped at The Delicatessen—a boarding-house run by Mr. E. A. Staley, at 308 S. Fifth St. Special rates were given the members attending the convention, and especially fine meals. The waiters were unusually courteous and attentive, and the "essen" was exceptionally "Delicat." Don't forget the above excellent place, should you ever be in Springfield.

Dr. Miller and I returned to Chicago Wednesday night, "right side up with care." I am glad to be able to say that the Doctor's health is greatly improved. He seems 10 years younger than a year ago.

Every bee-keeper in Illinois, and all who can possibly come from surrounding States, should arrange to attend the Chicago convention, to be held Jan. 9 and 10, 1896. Those who have in former years enjoyed the bee-conventions held in Chicago, ought to come and help to make it equal, if not exceed, any of the old-time meetings. Remember, you are all invited to come.

A Delightful Banquet was given by the Frank B. White Co., of Chicago, the evening of Nov. 14, to about 100 agricultural publishers and advertisers, in the Auditorium Hotel. It was the nicest banquet I ever had the pleasure of attending. The menu was the finest, and the literary program—toasts—the most entertaining I ever enjoyed. Best of all, nothing stronger than coffee was served in the line of drinks.

After the address of welcome by Mr. Frank B. White—whose business methods and daily life are in strict keeping with his name—the following took a prominent part: Mr. R. Roy Sherman, of the Wm. Deering Harvester Co.; Gen. C. H. Howard, of the Farm, Field and Fireside; Mr. R. P. Sharpless, an advertiser of cream separators; Mr. W. J. Adam, a wire-fence manufacturer; and W. J. Taft, a stock-breeder.

After the set addresses were finished, the meeting was thrown open for general discussion, which was participated in by many.

The Frank B. White Co. are Chicago advertising agents, and their plan was to get the prominent agricultural publishers and advertisers together, so that they might the better come to know and understand each other. It was a thorough success, and all credit is due Mr. Frank B. White, the head of the excellent firm before mentioned.

A California Honey-Man.—In last Gleanings the following paragraph appeared, from the pen of that banner "skipper" of the Golden States, better known as "Rambler:"

Mr. D. A. Wheeler, of Riverside, who owns about 1,000 colonies of bees, and has produced about 55 tons of honey during the past season, soon leaves for Chicago, where he will establish a house for the sale of California honey. Mr. Wheeler proposes to pay cash for all of the honey he handles for other parties. The present ruling price here is 3 to 3¾ cents for extracted honey, and 8 to 9½ for comb, and but little demand at those figures.

Chicago will be glad to welcome Mr. Wheeler when he gets here. There is lots of room here for the right kind of dealers in honey. If the nearly 2,000,000 people in Chicago were to consume annually as much honey as they should, what a large quantity it would require! Some day they may.

Three Bee-Papers, I understand, have dropped out of existence within the past less than six months, and one has changed over to something else. Thus only three of the oldest are left in the United States, viz.: Gleanings in Bee-Culture, Bee-Keepers' Review, and the American Bee Journal. There are, however, two others five or more years old—the Progressive Bee-Keeper and the American Bee-Keeper. And Canada still has her Canadian Bee Journal.

Honey as Food and Medicine.—A new and revised edition of this 32-page pamphlet is now issued. It has 5 blank pages on which to write or paste recipes taken from other sources. It is just what its name indicates, and should be liberally distributed among the people everywhere to create a demand for honey. It contains a number of recipes on the use of honey as food and as medicine, besides much other interesting and valuable information. Prices, postpaid, are: Single copy, 5 cts.; 10 copies 35 cts.; 50 for $1.25; 100 for $2.00. Better give them a trial. Send all orders to the Bee Journal office.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Getting Colonies Strong Early.

My bees quit breeding quite early this fall, while the honey-flow continued late. The hives are full of honey, but weak in bees. I expect a honey-flow to begin early in March. What can I do to get my bees strong by that time? C. S.
Lathrop, Calif.

ANSWER.—I'm afraid you can't do a great deal more than to let them alone. If, however, warm weather fit for bees to fly comes before the flow begins, and the queens do not commence to lay, you might start them at it by uncapping some of the honey in the hive. It's something unusual for the breeding to stop early when the honey-flow continues late. I wonder if your queens stopped laying because they were crowded out with honey.

How Many Langstroth Frames for a Good Queen.

I live in the center of San Diego county, where a large hive is needed, I think, if anywhere. I have a few bees in a bad hive, which I don't like. I intend to get about a dozen Langstroth hives in the spring, but I cannot decide on the size. Now how many Langstroth frames can a good 3-banded, leather-colored Italian queen fill? Would it do any harm if the hive were too large? The bees could fill it up with winter stores, could they not? A. N. M.
Foster, Calif.

ANSWER.—I don't know for certain just how many frames she can fill, but more perhaps than she generally gets. I suppose you are working for extracted honey, and in that case it is not generally considered that an overplus of combs will do any harm, only it isn't nowadays considered advisable to extract from combs containing brood. Chas. Dadant & Son are amongst the most successful producers of extracted honey, and they use what is equivalent to 12 Langstroth frames. I have had queens occupy 14 frames.

Syrup Pails for Holding Honey.

I would like to ask whether syrup pails would do to put extracted honey in. The pails are made of pine, have three hoops on, and are well made. They hold from 1½ to 2 gallons each, and have a tight-fitting cover. W. C.
Luce, Mich.

ANSWER.—I'm afraid they wouldn't be good. The boney would be likely to taste of the pine. But you might provide against that by treating the pails as some treat their barrels. Heat some paraffine quite hot—beeswax will do, but costs more—pour it into the pail, quickly turn the pail about in such a way that the paraffine comes in contact with all parts of the inside surface, then pour it out again. If you move lively about it, there will be very little paraffine used, but a thin coating will cover all. It will be better to use quite a quantity, for if you use a very suall quantity it will quickly cool and you will have a coating unnecessarily thick. The pail should not be too cold when the application is made. Don't soak the pails with water before using.

Wintering Bees in a Damp Cellar.

I have quite a number of colonies of bees, some in chaff hives, which I winter out-doors. I also have a number of colonies in single-board hives. Those I wish to winter in the cellar, but my cellar is damp; the walls are stone, and the bottom earth. What would you advise one to do under these circumstances? C. J. P.
Port Perry, Ont.

ANSWER.—If you have enough colonies to warrant the expense, I'd put them in the cellar and I'd keep enough fire there to keep the temperature at perhaps 50°. You can tell better about that by seeing at what temperature they are quietest. Hot stones or something of that kind could be used, but hot water wouldn't do, and I wouldn't use an oil-stove. The vapor from the burning oil is bad for the bees, and the oxygen of the air is used up by the flame—the very thing that the bees need. I don't know of anything better for a fire than what I use—a small cylinder stove, in which is kept, day and night, a low fire of anthracite or hard coal, the fire never being allowed to go out till the weather becomes so warm it isn't necessary. The door of the stove is left open all the time, both because that is the only way to keep a low fire, and because it helps the ventilation of the cellar. I generally keep my cellar at about 45°, but a very damp cellar I would keep warmer. If I had a damp cellar, and only one or two colonies to put into it, I believe it might still pay to have a stove and warm it up occasionally.

What Size Hive for Comb Honey?

Having sold out my stock of bees, hives, and everything, I wish to begin anew next spring with from two to six colonies. Now the question is: If you were in my place, what size hives would you buy, thinking to produce comb honey?

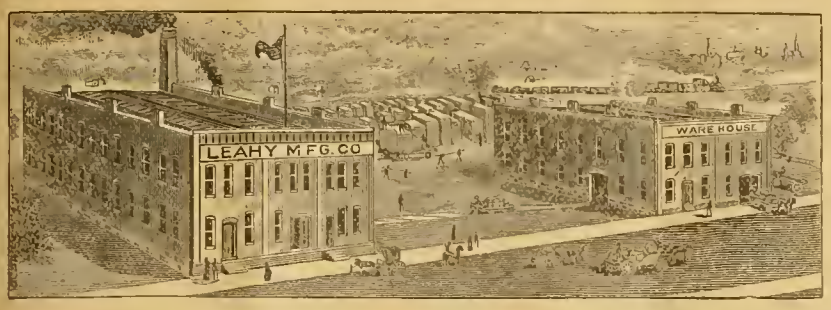
I came here the latter part of September, and I have not seen one bee since I came, and cannot hear of any within four miles of this place. I do not know what there is for early blossoms; there are quite a lot of willow trees set around in the place; all the streets are graded (that is, worked up with plow and scraper), and have grown up to sweet clover, and the prairie is covered with golden-rod for miles, but I never saw but one bee on golden-rod in my life. E. H. B.
Chicago Lawn, Ill.

ANSWER.—I'm sorry to say I don't know. The question as to the size of hives has been a burning one for some time, and I have been trying to find out what is best for myself, but have been somewhat hindered in making any decision from my own experience, from the fact that the years 1894 and 1895 have been years of dead failure of the honey crop in this region, so practically I know little more about it than I did two years ago. I do know that many queens, and perhaps nearly all good queens, will keep supplied with brood more combs than are found in an 8-frame hive. So I'm inclined to think I want more room than that before the main harvest comes. Whether that room should be allowed the whole year around is a question. Again, I don't know whether bees will do as well with 10 or 12 frames in two stories as in one. If they will, I prefer the 8-frame hive, with the opportunity of enlarging to any desired capacity by means of a second story. If obliged to choose at the present time, I think I should take the 8-framer, but I don't know how long I'll be of that mind.

Earn Your Own Subscription.—Any present subscriber can earn his or her own subscription to the American Bee Journal for one year by sending *three new subscribers*, with $3.00. A copy of "Bees and Honey" will also be mailed to each new subscriber, and the Bee Journal will be sent to the new readers from the time the order is received up to the end of 1896. This is an easy way to earn your own subscription and at the same time help to circulate the Bee Journal. Remember, getting 3 new subscribers pays for your own subscription for 1 year! Of course, no other premiums will be sent in addition. This is a straight offer by itself.

Liberal Book Premiums are offered on page 754, for the work of getting new subscribers to the Bee Journal. It is a fine chance to get a complete apicultural library. Think of it—40 cents' worth of books given to the one sending a new subscriber! Remember, please, that *only* present subscribers to the Bee Journal can take advantage of that offer. The publishers of the Bee Journal believe in making it an object for the old subscribers to push for new readers among their neighbors and friends, hence the generous prem offers to them. It is hoped that all may begin *now* to work. Sample copies of the Bee Journal free.

Now is the Time to work for new subscribers. Why not take advantage of the offers made on page 754?



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Dear Sirs:—The Sections came duly to hand. Indeed, they are very nice. Yes, sir; they are as good as the best. CHARLES H. THIES, Steeleville, Illinois.

Leahy Mfg. Co.:—I have received the bill of goods. I must say they are the choicest lot of Hive-Stuff I have ever received from any place. I admire the smoothness of your work, and your close selection of lumber. Yours very truly. O. K. OLMSTEAD, Orleans, Nebr.

Dear Sirs:—The Sections arrived in due time, and are all O. K. so far as examined. They are simply perfection. I can't see how you can furnish such goods at such low prices. I hope you may live long and do well. Yours respectfully. Z. S. WEAVER, Courtney, Tex.

Gents:—I received the "Higginsville Smoker" all O. K. It's a dandy; please find enclosed stamps for another. Yours truly. OTTO ENDERS, Oswegathe, N. Y.

Gentlemen:—I have bought Supplies from nearly all the large manufacturers by the carload, and I must say yours are as good as the best. Indeed, in many lines they are the best. It is a pleasure to handle them E. T. FLANAGAN, Belleville, Illinois.

The above unsolicited testimonials are a fair sample of hundreds we receive.

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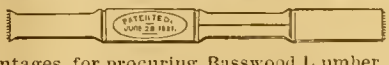

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UNTIL FURTHER NOTICE, we will allow 30 cents per pound for Good Yellow Beeswax, delivered at our office—in **exchange** for Subscription to the BEE JOURNAL, for Books, or anything that we offer for sale in the BEE JOURNAL. **Or, 26 cts. cash.**

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ATTENTION, BEE-KEEPERS!

We are Now Ready to Receive

Shipments of HONEY, both Comb & Extracted and BEESWAX

For the Season of 1895-96. We have made preparations to store Comb Honey in Any Quantity. This is our Fifth Year as a

HONEY COMMISSION HOUSE.

We received 812 Shipments last year. We kindly solicit the business of our friends of former years, and a Trial Shipment of all Bee-Keepers in the Country.

J. A. LAMON, 43 South Water Street, CHICAGO, ILL.

44A10t *Mention the American Bee Journal.*

General Items.

Good Yield of Honey.

I had 70 colonies of bees, spring count, and extracted 1,400 pounds of honey from them this season, or 200 pounds per colony.

M. H. MARTIN.

Vallevista, Calif., Nov. 19.

Little Swarming—A Partial Crop.

I have at present 206 colonies of bees in four apiaries. I did not try to increase any this year. They swarmed but little. I worked altogether for extracted honey. It was what I call a poor season; I got, however, about 7,000 of honey, and left plenty of honey in the hives for wintering.

A. C. ATEX.

Round Rock, Tex., Nov. 19.

Honey from Lindens and Sweet Clover

The white clover yielded nothing here this year. A few lindens and sweet clover gave a surplus to the stronger colonies—about 30 pounds, and the same amount was stored again in September from asters and golden-rod. I began last spring with 97 colonies, and had 6 swarms.

NIELS N. ALLING.

Perth Amboy, N. J., Oct. 26.

Results of the Past Season.

I started in last spring with 12 colonies, increased to 30, and got 300 pounds of comb honey. I introduced three queens, and lost one of them. The bees are all in good condition for winter. I have the Langstroth 8-frame hives, and like them. Bees swarmed a good deal in this part of the country this year. Our big honey-flow was from poplar this year. Comb honey, white, sells here at 10 cents per pound; extracted at 8 cents.

The Bee Journal is a good friend to all who keep bees. M. W. GARDNER.

Bankston, Ala., Nov. 17.

Bees Eating in Winter Quarters.

I see that on page 718 I am offered a good premium by Mr. Heise—a pigtail—if I can make my idea work in actual practice as it looks in print. He asks me how I train my bees to keep from eating when they can't fly out. It is not my training, still I will hold the fact as before stated, and to convince him that I know whereof I speak, I will say, take one of your best and strongest colonies, and when winter sets in in earnest, and bees cannot fly out, weigh that colony, then treat me rightly and impartially and be sure to weigh them again, when you see a change for warm weather, before they fly out. Let that be a month, or three months, and with the same scales. Then cut that pigtail off just back of the ears, and send it to me, for if I am not mistaken you will find it not my training, but Nature's, as I have stated.

Mr. Heise, let me ask you what they do with so much food as you speak of, while in confinement. Do they eat to the amount of 20 to 30 pounds of honey to the colony during the winter, and absorb all of it, or what goes with it? Bees are clean, and I tell you when a spell of the so-called diarrhea gets them, they are sure to get out of their hives. If you will notice on the snow, any day when your bees have a flight, and there is snow on the ground, you will surely be convinced of what I say in regard to this diarrhea. Or let your wife do as my wife did two years ago—hang out a big washing near the bees that had not been out for a long time. She surely had her clothes all to wash the second time—they were spotted all over.

Now, Mr. Heise, I don't claim to know everything about the honey-bee, although my experience is self-experience. I stand open to conviction, and am thankful for the same. As I have said, I have handled bees

for myself nearly 50 years. The height of my ambition is in bees. I will venture to say that I have found more wild bees, and cut more bee-trees, than Davy Crockett ever did; and, for a fact, this season is the first I have ever read a bee-paper in my life. And seeing the bee-veil advertised, I thought I would make one, and it was the first veil that was ever on my face—and it shall be the last. I have been sent for all over this part of the country to handle and hive bees that had whipped all other people out.

I am not talking now for the chalk, nor the red apple—the pigtail is all I am after.

If I could see Mr. R. W. Walker, who lost that fine swarm, I would tell him just where he could find it, for they had a home picked out, and a tree cleaned out to go into. That is the reason they would not stay in the hive. He can find them yet. I wish I was there.

Now, Mr. Heise, I hope to hear from you again after testing my plan. Be honest.

Pollock, Mo. ANDY COTTON.

Cost of Starting in Bee-Keeping.

On page 639 of the Bee Journal, T. H. B., of Marcuse, Calif., wants to know what it should cost to start bee-keeping with 10 colonies. I don't know what it would cost in California, but I can tell him what it costs in Indiana.

Last spring I bought 4 colonies—3 on 8 frames, and one in a box-hive; six empty hives and one smoker, all for $6.00. On Oct. 23 I bought 8 colonies—4 on 10-frames, and 4 on 8-frames, one smoker, one swarm catcher, Root's "A B C of Bee-Culture," and 10 empty hives, all for $20. They are all Italians, and in good condition, packed on the summer stands. IRA CLAPPER.

Monticello, Ind., Nov. 18.

A Dry Summer—Home Market.

Did we have a crop of honey? No. In 1893 and 1894 we had not a pound of surplus. I fed the bees the fall of 1893, and in 1894 they did the feeding. This fall I find the most of them are full of winter stores, and with just a few pounds of surplus, and it is the nicest honey I have ever had in Kansas. We had a dry summer, and it is very dry now. I am a farmer, and am getting too old to till the ground, so I truck a bit, and keep the bees for the fun there is in it. So far the bees have paid their way. I can do well with one good crop of honey every three or four years, for we have a good home market for all the honey we get. I trust we may have good crops next summer, and make up a bit for the past three years. SAMPSON STOUT.

Udall, Kans., Oct. 28.

Poorest Season—Hive Described.

The season of 1895 has been the poorest season for bees that western New York has ever seen. Bees have never failed to gather some surplus, excepting the season of 1891, when they gathered only enough for their own winter stores.

This season started out most promisingly, with 70 strong colonies in chaff hives in my apiary. The early blossoms, such as willow and soft maple, yielded large quantities of fine honey, with which the busy workers stored their hives to their fullest capacity, also many extra combs placed in the hives of the strongest colonies—in short, all had plenty of honey to winter them nicely, but, alas! on May 13 the mercury registered only 19 degrees, Fahr., and for about 10 days we had hard freezes every second night, killing all but the most hardy plants, destroying *all* fruits, both large and small; almost totally destroying the hay crop, and as this is largely a dairy country, the consequences may be easily imagined.

The next plant that yielded any honey was sumac; the second crop of blossoms came out about July 15, and produced only a small quantity of honey, which had to be used for brood-rearing, as nearly all the early honey had already gone.

After the sumac no honey came except a

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—OR—

MANUAL OF THE APIARY.

—BY—

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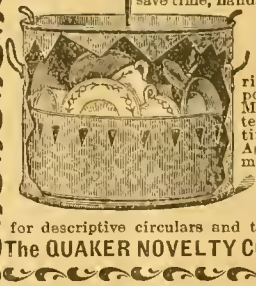

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little from catnip, and a few other wild flowers, but not enough for the actual needs of the bees in brood-rearing. When the buckwheat came into bloom the bees seemed quite busy, but seemed to store no surplus only while working on two pieces of the Japanese variety, when they stored and capped over about 10 pounds per colony. At present (Oct. 15) I am uniting a good many colonies, and feeding sugar syrup by the wholesale.

Feeding bees sugar syrup for winter stores is, with me, a new departure. What my experience or luck will be is hard to predict. I have kept bees for 13 years, but it has never been necessary to feed anything in the fall, though I have often fed in the spring.

Before closing this, I would like to describe the hive which, for me, is ahead of any other that has come under my notice. It is a two-story hive usually, and intended for comb honey principally, though it can be used equally as well for extracted. The bottom-board is two thicknesses of ½-inch pine, with about two inches of planer shavings between, and extends about three inches in front of the first story. The first story is 10 inches deep by 18¾ inches wide, and 25½ inches long, outside measure. Three inches from the front and back is placed an inch board, rabbeted on the inside edges, and just far enough apart (18¼ inches) to use the Langstroth frame. Two followers are fitted to go on either side of the brood-nest, and in this story can be kept a colony on one or more frames up to 12 frames. An entrance is made through under the front of hive ¾x8 inches. This will admit of packing on all sides and underneath with planer shavings. The second story is simply a shell, 18¾x25½x10 inches, outside measure, the bottom of which is beveled off on the inside to match a similar bevel on the upper edge of the lower story to shed off water. The second story will hold a large bag of shavings or chaff for winter packing, and will keep two supers in the shade during the honey season, as the case may require, or may be made to hold a large number of extracting-frames.

The cover is a light, ½-inch top, two inches high, covered with a sheet of 20x28 tin, painted. The cover has an inch hole in either end, covered with wire-cloth, and these holes allow sufficient air to circulate through the top to carry off all the moisture of the bees in the top story, and this hive may be well painted without any of the objections often raised against painted hives, as no board which is painted on one side comes in contact with the bees on the other.

Any person is at liberty to make and try this hive, as I make no hives except for my own use. J. B. HOWE.

Delevan, N. Y., Oct. 15.

Report for the Season—Wintering.

I took from the cellar on April 7, 1895, 30 colonies of bees in good condition, that being the number I put into winter quarters last fall. It has been a poor year for honey here. The frost in May killed the blossoms, and there was no basswood bloom this season. Basswood seems to blossom here only every other year, and this was the "off year" for it to blossom.

I took 900 pounds of comb honey, almost all of a dark grade, and increased the number of colonies, by natural swarming, to 54, which I have packed ready for the cellar when the time comes to put them in.

My cellar is under the dwelling, with cemented floor and plastered walls, with a matched board partition between the bee-cellar and the part used for vegetables. When I prepare the bees for winter, I put on an empty super and fill it with dry forest leaves, and I place a 2x4 scantling on the cellar-bottom at the front, and a 2x6 at back of the hives for the hives to rest on. I remove bottom-boards and place them under the hives the other side up, which makes a space of 2 inches below the frames. I raise the back of the cover enough to receive a piece of lath across the super, and put the leaves into the supers as soon as

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Honey & Beeswax Market Quotations.

CHICAGO, ILL., Oct. 16.—We never had as good inquiry for honey as this fall, and never sold as much. We have not received as good prices owing to the amount of California stock unloaded on this market, which was sold at a very low price, both comb and extracted. We quote: No. 1 and fancy, 13@15c.; amber and dark, 8½@11c. Extracted, 5@7c. Beeswax, 28c. J. A. L.

BUFFALO, N. Y., Oct. 14.—Honey is in good demand. We quote: Fancy, mostly 16c.; choice, 14@15c.; buckwheat sells slowly at 10@12c. Extracted very quiet. Will advance liberally upon all choice shipments of honey. Beeswax wanted at 28@30c. B. & Co.

CHICAGO, ILL., Nov. 7.—Comb honey, if fancy in all ways, sells at 15c., but the bulk of sales of white comb that grades No. 1 is sold at 13c. Amber or yellow brings 9@11c.; dark and brown, 8@10c., according to finish and flavor. There are large offerings of extracted at prices ranging from 4½@7c., according to color, body, flavor and package. Beeswax, 28@30c. R. A. B. & Co.

CINCINNATI, O., Nov. 20.—There is a fair demand for comb and extracted honey, with a good supply. Comb honey sells at 12@15c. for best white, in a jobbing way. Extracted brings 4@7c. on arrival. Beeswax is in good demand at 22@27c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, MO., Nov. 21.—The demand for comb and extracted honey is improving. We quote: No. 1 white, 1-lbs., 13@14c.; No. 2, 12@13c.; No. 1 amber, 12@13c.; No. 2, 10@11c.; dark, 8@10c. Extracted, white, 6@6½c.; amber, 5@5½c.; Southern, dark, 4@4½c. Beeswax, 22@25c. C. C. C. & Co.

NEW YORK, N. Y., Nov. 8.—Demaud for comb honey is very good, particularly fancy white, and is moving out about as fast as it arrives. We quote: Fancy clover, 1-lbs., 15@16c.; white, 13@14c.; fair, 11@12c.; buckwheat, 10@10½c. Extracted, buckwheat, 5@5½c, with supply equal to demand; white clover and basswood, 6@7c., with supply short and demand good; Southern, 50@55c. per gallon. Beeswax, 27@29c.; extra fancy, 30@31c. C. I. & B.

ALBANY, N. Y., Nov. 9.—Our honey market is in good shape, although prices, like on most all products, are not high; but receipts are lighter than last year, and there is a good, steady demaud, with a real scarcity of white honey. We quote: White clover, 15@16c.; mixed clover, 12@14c.; dark clover, 9@11c. Extracted, white, 6½@7c.; mixed, 5½@6c.; dark, 5@5½c. H. R. W.

NEW YORK, N. Y., Nov. 22.—We have a good demand for white comb honey, all styles, and it finds ready sale at 14@15c. for fancy, and 12@13c. for second grade. The demand for buckwheat comb is rather limited and has fallen off considerably. The supply is large and the market shows a downward tendency. We quote: In paper boxes and glassed, 10c.; unglassed, 9@9½c. Extracted is not moving very fast and the supply is plenty, especially from California. We quote: White clover and basswood, 6c.; California, 5@5½c.; Southern, 50@55c. per gallon. No demand as yet for extracted buckwheat. Beeswax in good demand and firm at 29@30c. H. B. & S.

PHILADELPHIA, PA., Oct. 23.—Honey is selling freely, and good, choice comb sells on arrival. Pure Western extracted white clover sells very quickly and is in big demand. We quote: Fancy white clover, 16c.; choice, 14c., dark, 11c. Extracted, 5½@6½c.; pure white clover, 8@9c. Beeswax will not, in our judgment, advance much more, as it did last year, large quantities having been laid up at low prices. It sells fairly well at 26c. on arrival. W. A. S.

Binders for this size of the American Bee Journal we can furnish for 75 cents each, postpaid; or we will club it with the Bee Journal for a year—both for $1.60. We have a few of the old size (6x9) Binders left, that we will mail for only 40 cents each, to close them out.

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they fall, and are real dry. I keep them on in the spring after taking the bees from the cellar, until I want to put on the sections. I haven't lost a colony in wintering the last three years. For ventilation, I have a 2-inch pipe running from the bottom of the cellar-bottom and connecting with the stove-pipe above.

I lost three swarms the past season by their going to the woods, and two swarms came to me, so I was only out one swarm.

AUSTIN REYNOLDS.

Cataract, Wis., Nov. 4.

Swarms "Lodging" and "Settling."

Is not Dr. Miller *hypercritical*?

"Any unpursued swarm which lodges on any property whatsoever without settling thereon, may be secured by the first comer, unless the proprietor of the land objects."

So says the Canadian law. The Doctor fancies there is something loose here, for he asks on page 726: "How can they *lodge* without *settling*? And how can they be secured without settling?"

If the Doctor "lodged" a tramp over night, would it not be inconvenient for him, if said tramp "settled" in his house and became a permanent occupant therein? No juggling, Doctor. R. MCKNIGHT.

Owen Sound, Ont., Nov. 16.

[The above being referred to Dr. Miller (as he was here in the office when Mr. McKnight's letter came), he replies as follows: —EDITOR.]

I wasn't trying to be hypercritical. Honest Indian, Bro. McKnight, I didn't think of the word "settle" as meaning anything different from the meaning constantly and universally given to it by bee-keepers. A swarm issues and "settles" on a tree, but never stays there permanently. In the law mentioned, it has a different meaning, and if I had looked upon it with the eyes of a lawyer, and not with the limited vision of a bee-keeper, I would have understood it. I was stupid, but please don't think me dishonestly critical.—C. C. MILLER.

A First Year's Experience.

In answer to your query on page 717, I would say that how little I know covers more ground than anything else. Before I got the bees I read the "A B C of Bee-Culture" carefully, the American Bee Journal and Gleanings, until I had gained some knowledge of the habits of the bee.

On April 15, 1895, I purchased a colony of Italian bees with clipped queen. April 19 I bought two colonies of blacks in box-hives, from a neighbor, and May 17 I transferred them to Langstroth 8-frame hives. May 24 I took three frames of brood and honey with the clipped queen from No. 1, put them into No. 4, giving them five frames full of foundation, replacing in hive No. 1 with three frames full of foundation, and a new tested Italian queen.

From No. 2 I took a frame each of brood and honey, and from No. 3 a frame of brood, making No. 5, to which I gave a new tested Italian queen, and five frames of foundation. "Now," said I, "we are all right, no swarms this year, and we will get some honey from No. 1."

I was not satisfied with the blacks, and so procured two tested queens. A practical, experienced bee-keeper had given me much good advice, and he was with me (July 6) at the time, caught and killed the black queens for me, and advised me to introduce them at once, so I did. I *learned that* was not a good plan, for one colony at least. No. 3 killed the queen, and on the 12th swarmed with a virgin queen. I was not at home; a neighbor was called in, who said they were Italians. Of course, I had only one colony of these strong enough to swarm, so I took it for granted, and the next afternoon, having some leisure, I concluded I would take some more advice I had read.

Taking hive No. 1 off the stand, I put the

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new hive in its place, and shook off some of the bees from No. 1 in front of it. Then the fun commenced. A good many of them went up my sleeves and entered vigorous protests. Well, I closed up the hive and carried it away about 50 feet, settled it carefully, went to the house, drank a glass of water with a spoonful of ammonia in it, scraped out about 40 stings, and was practically paralyzed, at least helpless for more than an hour. My wife had all the neighbors around me when I "came to," and she wanted to burn up hives and all, right away. I learned that bees *won't* mix and *will* sting "right smart." For two days the bees fought and slew thousands, and then I changed them, putting No. 1 on its own stand, and No. 6 in another place. This course hurt No. 1, and stunted No. 6.

Well, on Aug. 14, No. 5 (the nucleus from 2 and 3) swarmed—a grand swarm. So I have learned that in spite of division, bees will swarm if the queen is not clipped.

Now, as to results: No. 1, original Italian colony, 38 pounds of honey; No. 4, nucleus from No. 1, clipped queen, 60; No. 2, original black, Italianized, 19; No. 3, blacks that swarmed, 3; No. 5, nucleus from black, Italianized and swarmed, 3; No. 6, no honey; blacks, first swarm; No. 7, swarm from No. 5, Aug. 14, 12; No. 8, nucleus of Carniolans. Total, comb honey, 135 pounds.

The Carniolan nucleus covers four frames. I have fed them and given them a full comb of honey, packed them in the center of the hive with a dummy, Hill's device over the frames, super packed with bran, and I hope to see them come through all right. They are docile, industrious and hardy, being on the wing when no other bees show themselves.

B. F. ONDERDONK.
Mountain View, N. J., Nov. 9.

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Convention Notices.

WISCONSIN.—The annual meeting of the Wisconsin State Bee-Keepers' Association will be held Thursday and Friday, Feb. 6 and 7, 1895, in the capitol building at Madison. The program will appear in due time.
Platteville, Wis. N. E. FRANCE, Sec.

IOWA.—The Central Iowa Bee-Keepers' Association will hold its third annual meeting at Oskaloosa, Dec. 26 and 27, 1895. This will be the largest convention held in the State this year; many of the best bee-keepers of the State are on the program and a good time is expected. All are invited. Other bee-papers please copy. W. EMMET BRYAN, Sec.
New Sharon, Iowa.

IOWA.—The third annual convention of the Central Iowa Bee-Keepers' Association will be held in the Farmers' Club room at Oskaloosa, Iowa, Dec. 26 and 27, 1895. An interesting program has been arranged. Holiday excursion rates. Good hotel accomodations at $1.00 a day. Come, and bring questions for the Question-Box. This is the largest convention in the State, and should be well attended.
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The Special Meeting of the Illinois State Bee-Keepers' Association will be held in Chicago, at the New Briggs House, northeast corner of Randolph St. and Fifth Ave., on Thursday and Friday, Jan. 9 and 10, 1896—the week of the National Cycle Show—when excursion rates will be given. Notice will be published later as to whether these rates will be on the certificate plan or otherwise. Chicago hotel rates are 75 cents each, per night, two in a room; $1.00 if one in a room. Meals extra—pay for what you order, or go elsewhere for meals, if preferred. JAS. A. STONE, Sec.
Bradfordton, Ill.

MINNESOTA.—The seventh annual meeting of the Minnesota Bee-Keepers' Association will be held at Minneapolis, Thursday and Friday, Dec. 5 and 6, 1895. Every bee-keeper is invited to be present and join the society; it will be the most important meeting ever held. If you have any question you would like to have discussed, send the same to me, and come prepared to help make the meeting interesting and profitable. The State Horticultural Society convenes on Dec. 3, and continues for three days. Every person interested in bees and fruit should attend these meetings. Take receipt from your station agent, that you have bought ticket to the Horticultural meeting, so as to get reduced rates. J. P. WEST, Pres.
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Queens and Queen-Rearing.—If you want to know how to have queens fertilized in upper stories while the old queen is still laying below; how you may *safely introduce* any queen, at any time of the year when bees can fly; all about the different races of bees; all about shipping queens, queen-cages, candy for queen-cages, etc.; all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know—send for Doolittle's "Scientific Queen-Rearing"—a book of over 170 pages, which is as interesting as a story. Here are some good offers of this book:

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35th Year. CHICAGO, ILL., DEC. 12, 1895. No. 50.

Contributed Articles.

On Important Apiarian Subjects.

Large Hives; Size and Shape of Hives; and Conditions Necessary to Safe Wintering of Bees.

BY CHAS. DADANT.

The great fecundity of the queen-bees, and the aptitude of worker-bees to amass provisions for times of scarcity, are the two main qualities that have induced man to add the honey-bee to the number of animals domesticated by him. Others among the insects harvest honey, but owing to the lack of these two qualities none gather together such large amounts of it.

But to take full advantage of these two most important qualities, which thus place the bee above all other honey-gathering insects, it is, before all, indispensable to furnish those precious insects lodgings which may enable the queen to utilize her fecundity, while, at the same time, furnishing to the bees a convenient storage-room, not only for the needed stores required for their sustenance during the unfavorable parts of the year, but also to secure a surplus to their owner; at the same time this shelter must prove commodious and sufficient to protect them against the inclemency of the weather, in the winter. I here propose to consider both the size and shape of the hive, and the conditions necessary for a safe wintering of the bees; these two questions being intimately connected with each other.

How many eggs is a queen able to lay during the height of the breeding-season, in spring? We will all agree that this breeding-season begins more or less early, and lasts more or less according to the weather and other circumstances in different localities. I believe also that the bee-keepers have generally recognized the fact that some queens are prolific enough to lay as many as 4,000 or 5,000 eggs in 24 hours. I have often seen, in observatory hives—when there was plenty of room, and the queen did not have to hunt about for cells—a queen lay six eggs in a minute. Other observers agree with me in this; those at least who have taken the pains to investigate this question. And here let me say that there are too few men who take the trouble to investigate for themselves. An observatory hive—a real one, with only one comb, with two sides of glass, so fixed that nothing can escape the eyes of the apiarist—is but a small expense, and will prove a source of great pleasure and of endless instruction; for many things yet remain to be learned of the natural history of the bee.

To return to my subject: Six eggs laid in one minute by the queen would, at the same rate of speed, give 360 eggs in one hour, or 4,320 eggs in 12 hours; allowing one-half of the 24 hours for rest. It is true that the time given may not be always well occupied by the queen, and that she is probably often delayed by some irregularity of the combs in which she lays in a circular way, or by her coming across spots occupied with pollen or honey, when she will then drop her eggs wherever she happens to be, proving evidently that, at the breeding-season, she must lay without intermission, and that this laying is independent of her will. If we suppose that her laying is thus hindered, so that one-eighth of the above-mentioned time be lost in this way, she is still able to lay 3,780 eggs in this space of 12 hours.

Dr. Angelo Dubini, who ranks among the first of the bee-masters of the world, and whose writings on bees are well known, wrote as follows, in L'Apicolotore, of Milan, Italy, in the November number:

"How do we verify the assertions of the apiarian writers who hold that the queen, at the proper time, may deposit 3,000 eggs, or more, in the combs in 24 hours? I have examined a hive, and have ascertained that all the cells were occupied with brood, eggs, or honey. Then, in the middle of these combs of brood, I have inserted an empty comb made of worker-cells, and fresh and clean. I found, on the morrow, that all the cells, or about all of them, were occupied with new-laid eggs. I figured that this comb contained 4,250 cells; since it measured 5 square decimeters, and since each square decimeter contains 850 worker-cells."

Taking the number mentioned above, of 3,780 eggs, as the very probable laying capacity of a good queen, for every 24 hours in the breeding-season, this will give us a requirement of nearly 80,000 cells, just for brood, since it takes 21 days for each egg to mature into a perfect bee. In this we do not figure the space occupied by drone-combs, which take much more space than worker-combs, since 18 drone-cells occupy the same surface as 27 worker-cells.

As each square inch of comb contains about 54 cells (worker-cells), the queen will need, for her three weeks' laying, nearly 1,500 square inches of comb, which would necessitate—

For the Langstroth-Simplicity hive, 10 frames.
For the Gallup hive, 12 frames.
For the American hive, 10 frames.
For the Quinby (old style), 8 frames.

I will call your attention to this, that we have figured no room whatever for the supplies of honey and pollen, which are most indispensable to bees for their daily needs. In a hive overflowing with bees and brood, this is most important; for they must be able to go through a few rainy days, or of changeable weather, even at the opening of the spring, when the crop is expected soon to commence, without having to stint, with their fast-hatching crowds—the hope and pride of the opening season. As well might a farmer expect to raise a large crop of corn without saving enough to feed the horses that help tend and plow the field. Between one-fourth and one-fifth of the entire space is often taken up by these supplies.

I know that no one question has raised as many discussions between apiarists as the determining of the room needed in the breeding apartment, and the necessity of furnishing the queen with all the space that she may be able to occupy with her eggs; but I have often noticed that those who have opposed the large hives in the discussions, have not sufficiently investigated the matter; since most of them have never tried anything larger than the 10-frame Langstroth hive. For us it is too small, but they thought it too big, and reduced it to 8 frames, which some even speak of reducing to 6. Gentlemen, you are going in the wrong direction; try the other route.

The 8-frame hive, if we deduct only one comb for the provisions, coutains room for only 51,000 worker-cells, or 2,400 eggs per day, and if we allow what ought to be given—two combs for the provisions, pollen and honey—we have but 2,000 cells left for each days' laying, not taking into consideration yet the fact that a part of this space is occupied with drone-comb, which, being larger, still reduces the number of

cells the queen has at her disposal. This is less than half of the quantity actually counted by Dubini as one day's laying.

A German bee-keeper, who favors small hives, wrote not long ago, that the queens, after having laid eggs for about two weeks, are in the habit of resting five to six days at a time. He had noticed this several times. This fact is easily explained in small hives; the queen stops because she finds herself short of empty cells. In fact, it often happens, early in the spring (in April at this latitude), that the laying is very much retarded by cold weather, sometimes almost entirely stopped, because the bees are unable to go out in search of pollen or of water, which they need in quantity, water never being stored ahead. The queen is fed more sparingly; the oldest larvæ hatch out readily, making room for more egg-laying. Thus when the bad weather is at an end, the trees beginning to open their buds, the queen's egg-laying re-commences with great energy. The queen has soon caught up—filled all the empty cells—she is then forced to wait until the first eggs laid at the close of the bad weather have hatched out. Thanks to our large hives, we have never had a chance to notice such an interruption in the laying, during good weather, in the busy laying season.

It is only since I came to the United States that I have been able to appreciate the large hives. Although having experienced a great liking for bees ever since I was a child, as the hives which they used then were the old style of straw skeps, none of these were large enough to give me the least suspicion that there might be some profit in aggrandizing them, except with supers for harvesting the crop. My attention was called to this subject about 32 years ago, after my arrival in America. One of my countrymen, whom I visited on my landing in Illinois, had seven box-hives in a corner of his yard.

One of those hives was a huge box, made with boards, 18 inches in diameter, and two feet high. The hive was so old that the sap-wood had rotted out, and one could see the combs along one side, from top to bottom. This hive had contained bees, they told me, for over 20 years, had swarmed but little, and was still inhabited by the descendant of the first swarm that had been hived in it. Its population had always wintered successfully, in spite of the crack I have mentioned, which, in the later years, had exposed the bees to the cold, and yet smaller colonies had been hived and had died by its side for a number of years. This convinced me—as it would have convinced most of my readers—that bees, in this climate, winter better in large hives than in small ones. The old age of its combs also convinced me that the French idea, that combs five or six years old are worthless, was a great delusion. Thanks to Progress, the French have gotten over this delusion as thoroughly as our American bee-keepers, and they are also bravely getting over that other delusion, that small hives are best.

Hamilton, Ill.

(To be continued.)

Does a Poor Yield Imply Overstocking?

BY F. L. THOMPSON.

I wish Dr. Miller, in one of his future "Thinks," would tell us how he knows when there is a poor yield; that the season is not almost wholly responsible for it instead of the number of bees in the locality. If he can give instances of overstocking in average localities in seasons of a good flow of nectar, he has a good case; but if overstocking is generally complained of in poor seasons, does not that tend to show that the flowers rather than the bees are to blame? I believe Mr. Carlzen's locality *is* overstocked, for any one going through and around Montclair would see very few blossoms. But his locality is exceptional. In an average locality, in a poor season, the blossoms themselves are out in full force. It is the nectar that is scanty. In a good season there may be no more blossoms to visit than in a poor one. Isn't there something shaky about the idea that the bees crowd one another on the blossoms more in a poor season than in a good one? At any rate, my experience, as given in my former article, is confirmed by an item quoted with approval by Mr. Heddon from Mr. James M. Martin, in the Bee-Keepers' Review for 1891, page 326; "When the season is poor for 200 colonies, it is poor for four, and when good for 200, it is good for 600, all in one yard."

As to the "uncertain tenure by which the bee-keeper holds his ground," that depends upon the assumption that a poor season would be a good one if fewer colonies were kept, which does not seem to be proven. It doesn't worry me, anyhow. If poor seasons are made worse, and good ones poor, by overstocking, the non-specialists and side-issue farmers will give up the field in disgust long before the specialists cease to make money with their plans of utilizing or preventing swarming, and the time and ability to carry them out. The evil will cure itself. Last season I kept exact account of the proceeds in cash of a lot of 15 colonies, whose swarms were returned by Mr. Lyman's plan—(Vol. 34, page 211). They averaged $2.56 net. Another lot, which for reasons which need not be mentioned had to be managed in the old way—old colonies not removed, second swarms allowed, etc.—netted less than a dollar apiece, value of swarms included. Both lots were in the same yard, and under the same conditions. But what farmer would want to bother himself by doing things just exactly at the right time? (!)

I do not wish to be understood as favoring excessive competition, in "coming parlons near saying the bee-keeper needn't pay any attention to the warning after he has once started in with a few colonies." "Competition is the life of trade," and, "There is always room on top," are both maxims which at times are misleading, if not unjust, to the 90 per cent., who fail in business. But I do say that the non-specialist should yield first. At present, there seems to be little danger of more crowding in the honey-business than in any other, by *specialists*, who should not be unjustly discriminated by law in favor of those who have other resources to fall back on. A specialist, moreover, will not be likely to make much trouble in overstocking, just because he understands his business. He knows that if he should do so, his actions would recoil against himself. The numerous small bee-keepers would be the ones mainly responsible for overstocking, just as they are for foul brood.

Arvada, Colo.

What Dr. Miller Thinks.

AMALGAMATION.—I don't know whether it will do any good to discuss the proposed Constitution, published on page 757. It can probably be voted upon by the Bee-Keepers' Union only in the form given, as there isn't time to make any changes. It's a good deal easier to find fault than to propose the remedy, nevertheless for the sake of the future it may be well to heed the editor's hint as to "suggestions and discussion."

Article I, provides that notice of annual meetings be given in the bee-papers and also mailed to members. Isn't it unnecessary expense to mail notice of a thing published in the bee-papers?

There is lack of specific mention as to when and where the annual election is to be held, only the officers are to be "elected by ballot," the ballots "printed and mailed by Dec. 1," "and the polls shall close on the last day of December." Putting those items together, and remembering what has been the practice in the Union, the supposition is that the ballots are to be sent to the Secretary. Very decidely that's objectionable. Indeed, that sort of voting can hardly be called voting by ballot, for one of the objects of the ballot is to secure "secrecy and liberty." Certainly, there's no secrecy, and the average voter will not feel the same degree of liberty when he sends an open vote to one of the officers to be elected. I think it's hardly necessary to argue the matter; and any one can see the objection. The remedy is another matter.

Article IV provides that an extra assessment may be made each year. I think the Bee-Keepers' Union never felt a necessity for anything of the kind, and I believe the necessity is much less now than formerly. Why keep ont members by putting in such a thing?

Provision was made in the Bee-Keepers' Union against receiving members who should come into the society *after* getting into trouble about their bees, and it was a wise provision. No insurance company would insure a building after it had burned down, and then pay for its loss. Is no safeguard of the kind needed for the new organization?

I am bound to say that the Constitution seems to be much more objectionable than when I first read it over, and it is *very* unfortunate, to put it mildly, that the committee appointed Sept. 6 should have made their report so as to see the light not till 12 weeks later, with *no possible opportunity* for amendment or effective discussion before being voted on. [See page 797.—EDITOR.]

AGE OF BEES.—G. W. Demaree thinks the bees which refused to rear or accept a queen could not have done so because "too old," because many a queenless colony in spring had acted all right. (See page 758.) Those queenless bees in spring had outlived by several weeks the stubborn ones, and yet in one sense they were younger, for a bee is understood by many to grow old only as it becomes old through labor. Any-

way, the stubborn bees would probably have been all right if they'd been taken younger.

SOCIALISM IN BEES.—That case wherein the last drop of honey was divided among the whole colony, mentioned by Mr. Demaree on page 758, is a very striking one, and I think it is the regular thing in all cases of starvation—certainly in all that ever I observed. I think there is one exception, however, as to perfect equality. The queen seems to have a little bigger share than the others, for she's always one of the last to succumb.

A BAD BREAK.—Quite refreshing it is to read on page 760 about that $471,000 to be reached in the short space of 10 years, to say nothing about the odd $40, but it is too bad that in an article so solid and thoroughly reliable throughout, our Learned friend should have made the statement that bees get honey from willow-buds. Such a statement is utterly misleading, and may cause untold disappointment in the minds of some who find the willows covered with *buds*, but no honey therefrom. Mr. Learned would find out, if he took the trouble to investigate, that willow blossoms and not buds supply nectar. Too bad that such a solid article should be marred by such "a bad break."

CHICAGO HONEY PRICES.—The editor says on page 764, "It seems to me that the actual wholesale selling prices of honey on the very day the dealer quotes should be given." On the next page the editor speaks of 10 per cent. commission. I think 5 per cent. is the usual commission on sales of honey in Chicago. Are there exceptions? And if so, on what grounds do any charge twice as much as common?

THE FIRST VOLUME.—Of late I see occasional quotations in these pages from the American Bee Journal for 1861. That's wise. What a mine of wealth that volume seemed 34 years ago. And to this day I refer to that volume oftener than to any other.

LATE EXTRACTING.—Referring to page 771, Mr. Bevins has my gracious permission to lick the extracting-knife as often as he pleases, provided it be washed off before being used again; but in the name of all that's reasonable, what business has he using an uncapping-knife in November?

THE CHICAGO HONEY MARKET.—A correspondent has been looking up the Chicago markets, and finds honey, both comb and extracted, offered at one of the leading department stores at 20 cents; the honey bearing the label of a firm which quotes in the honey column of this Journal extracted at 6 to 7 cents, and comb at 13 to 15 cents. He thinks bee-keepers should be warned against such robbery. I confess I don't know enough to decide just what is the right thing in such matters. There are so many stand-points from which to look. The consumer, while sitting at the breakfast-table enjoying the nice tumbler of extracted honey for which he has paid 20 cents, looking over his morning paper sees extracted honey quoted at 6 to 7 cents. He says at once: "That grocer has charged me three prices for that honey. It's sheer robbery. At the outside he ought not to have charged me more than 10 cents, and that would have given him 50 per cent. profit—enough profit for any business?"

The producer who happens to see the honey sold at 20 cents, says: "Twenty cents is none too much for such honey as that. But the man who paid me only 7 cents for it just robbed me of about 13 cents."

The dealer says: "I ought to be able to sell that honey for more, but other stores sell at that, and so I can't go above 20. You see when I pay 7 cents for a pound of honey, and 5 cents for the package, that makes it 12 cents. Then when I pay for having a man to put it up and label it, that brings it up to about 14; and when I've paid my rent and other expenses I can hardly make a living selling it at 20. I declare, I must see if I can't buy at less price, for its robbery to pay 7 cents."

Now I might go on theorizing about how the thing should be, but I'll leave that for others. As a producer, I feel like saying: "In view of the real value of honey, and comparing it with butter, it seems the consumer can afford to pay 20 cents; but I'd like the thing managed in some way to get as large a slice as possible out of the 20." How shall it be managed? Here's a fair subject for discussion. Who will turn on the light? Perhaps the most unprejudiced view might be given by those who are both producers and dealers.

FOUL BROOD.—A bee-keeper raises the question whether there may not be danger in attempting the cure of foul brood as given on page 591, in view of the fact that the instruction is to feed the diseased colony at a time when "the bees have no other sources," and that this is one of the conditions absolutely essential to success. The thought is that there would be great danger of spreading the disease by such feeding, and there seems ground for fear, from the fact that the diseased colonies are weakened by the disease, and poorly able to defend themselves, and that there is always some danger of starting robbing by feeding a weak colony, that danger being very greatly intensified by having the feeding take place at a time when the bees have no other resources. The owner of the bees, however, might argue thus: "Better that others should suffer a little inconvenience than that I should suffer a great loss. If this is a sure and easy cure, I want to apply it to my colonies, and if the disease does become spread in all directions thereby, it will be but little trouble for others to cure their bees as I have mine."

I confess to a depth of ignorance as to any personal knowledge of foul brood, and would like to know what those who are familiar with it have to say, especially such men as Mr. McEvoy and Dr. Howard. Marengo, Ill.

A Building for Wintering Bees.

BY L. M. WILLIS.

I have just read Dr. Miller's reply to R. R., on page 729, in regard to wintering bees in a building not frost-proof. It strikes me that this is just the place for me to chime in and give my way of wintering bees. My building is like unto two boxes, the inner one 12 inches smaller all around except the bottom, than the outside one, which is common rough lumber built like all balloon frame buildings—the one thickness of boards have battens over the cracks; the roof is shingled; one thickness of jointed boards comprise the floor for both; and the inner part has a flat roof of one-inch rough boards.

I put four inches of chaff on the floor, and fill the 12-inch space with the same. The inner walls are covered with building-paper. I nail strips of fencing to pieces of 2x4 scantling, set edgewise, and upon these strips I set the hives as close as I can. When it gets too cold for bees to remain out-doors, I take one hive at a time and draw it to this building, upon a hand-sled, if we have snow or not. I remove the cover and place a piece of gunny-sack directly over the frames; upon this I put a shallow super with pattern-slats left in; I fill the super with chaff. Across the super I put a piece of lath at each end; upon the pieces of lath I put another hive, and tier up three or four deep, and put the cover on the last hive, with lath under it. This gives space for the steam to pass out, but doesn't let much cold in. I leave the bottom-boards on, but leave the entrance open. The entrance to my hives are ⅜x12 inches.

When my bees are all in, I shut the door, which is filled like the wall space. I have a 4-inch vent in the roof of the inner box, which opens into the outside room.

I have wintered bees in this house, and had them in fine condition each spring, without any loss worth mentioning. I have lowered a thermometer down through the ventilator when the mercury showed 6° below zero in the place where the bees were; at that time it was 42° below zero out-of-doors. I have frequently tested it, and found it to show almost a zero temperature.

My bees are always well supplied with stores, and strong in bees when put into winter quarters.

Now, I expect to see some doubts expressed in print, on this style of wintering, but I think I can show hives as free from mold and dead bees in the spring as any one. When I put the bees out in the spring I close the entrance to 3 inches, and leave the super and chaff just as it was, except that I put the cover on tight. My bees are out-doors yet.

Loyal, Wis., Nov. 18.

Report of the California State Convention.

BY J. H. MARTIN.

November 18, 2 p.m., found Pres. Cook in the chair, and a fair attendance at the meeting of the California State Bee-Keepers' Association in Los Angeles.

This meeting proposed to devote much of its time to the subject of marketing honey. The discussion upon methods of marketing started off lively. The Los Angeles County Bee-Keepers' Association presented the plan of selling the product of that county through one firm, and Mr. Edwards, of the firm

selected, stated his plans. The method seemed very good, but did not seem broad enough to satisfy the members of the State Association, and after a full discussion a committee of five was appointed to draw up future plans.

In their report they recommended plans similar to those adopted by the citrus fruit producers. This report was unanimously adopted, and it was voted to work under the name of THE CALIFORNIA HONEY EXCHANGE. The same committee was re-appointed to work for the perfection of the new organization.

PLANTS FOR HONEY.

This vital question being disposed of for the present, Prof. Cook introduced the subject of "Plants for Honey." The gum-tree, or eucalyptus, produces much honey, and Mr. Abbott Kinney, an expert, gave an interesting talk upon the various species. There are 150 varieties of this tree. Several species are especially rich in nectar, and the bloom opens all the way from October to March, and at a time in the year when bees get but little honey from other sources. The species, Robusta, Ficifola and Eugensitas, are especially rich in nectar.

The pepper tree came in for unfavorable comment, for it is claimed that the tree gives a dark, peppery-flavored honey. The fact was brought out that the bee works upon the berry as well as the blossom.

Alfalfa was highly recommended as a great addition to our honey-flora, but ranchers have a pernicious way of mowing it just as it is coming into bloom. The only way to receive benefit from it is a greater acreage and a dairying community.

Mr. J. S. Harbison—the father of California bee-keeping—sent an essay, which advocated independent action in the marketing of honey, and through co-operative plans. Mr. Harbison thinks that the industry has been reduced fully 75 per cent. within the past 15 years, owing to the clearing up of lands for settlement, low prices, and excessive freight-rates. But he thinks by united action it can be restored; and in relation to our honey he uses these words:

"It is safe to say that no product of *soil* or *water*, whether fish, flesh or foul, or that of fruits in all the varied forms in which they are marketed, is sold at so low a price relatively to excellence *as is that of our high grades of California honey?*"

Mr. Harbison holds that our water-white honey—the product of the different varieties of sages—has no superior in any country, and should sell for *full 50 per cent.* more than it has for the past few years.

The new bee-disease—paralysis—and foul brood were discussed. The new disease seemed to be more prevalent near the coast than in the interior.

Among the several resolutions introduced was one of sympathy with the bereaved family of the Rev. L. L. Langstroth; and another to the effect that California bee-keepers were in accord with any movement that might be inaugurated for the placing of a suitable monument over the last resting-place of Mr. Langstroth.

The election of officers resulted as follows: Prof. Cook, re-elected President; J. H. Martin, Secretary; H. E. Wilder, Treasurer; and Vice-Presidents were elected for the six southern counties.

The convention then adjourned.

Bloomington, Calif. J. H. MARTIN, *Sec.*

P. S.—The Secretary wishes to add to this report that it will be to the interest of every reader of the American Bee Journal in California, who does not receive our annual notices, to send to me his or her address, with the addresses of neighboring bee-keepers. I wish to keep every bee-keeper on this Coast posted in relation to the "California Honey Exchange."

To our surprise, Mr. Jacob Alpaugh, of Ontario, Canada, came into our meeting, followed by his whole family.

Mr. Gemmill next.

The committee upon organization expect it will take some time to organize, but they are in it to stay until success is assured. J. H. M.

Earn Your Own Subscription.—Any present subscriber can earn his or her own subscription to the American Bee Journal for one year by sending *three new subscribers*, with $3.00. A copy of "Bees and Honey" will also be mailed to each new subscriber, and the Bee Journal will be sent to the new readers from the time the order is received up to the end of 1896. This is an easy way to earn your own subscription and at the same time help to circulate the Bee Journal. Remember, getting 3 new subscribers pays for your own subscription for 1 year! Of course, no other premiums will be sent in addition. This is a straight offer by itself.

Southern Department.

CONDUCTED BY

DR. J. P. H. BROWN, AUGUSTA, GA.

[Please send all questions relating to bee-keeping in the South direct to Dr. Brown, and he will answer in this department.—ED.]

The Cotton-Bloom a Non-Producer of Honey.

DR. BROWN:—Mr. J. J. Keith has shown me a communication to you, in which he expresses the opinion that the cotton-plant is not a honey-producer; and also several other letters, all of whom, I think, hold a different opinion. He seems to be getting lonely, and wants some one to keep him company, and at his suggestion I write to say that I agree with him entirely, so far as this section of country is concerned. I can't, of course, say what may or may not be the case elsewhere.

Cotton is the chief product here. Within a radius of three miles (which we are told is within the limit of a bee's flight) there are many hundreds of acres of land planted in cotton every year. Cotton begins to bloom here about the middle of June, and blooms continuously, unless checked by a drouth, until the first killing frost, which is usually about the end of October. I have been keeping bees for over 20 years, and in all those years I do not think I have ever taken a pound of surplus honey after the middle of June, and I would certainly have taken it if there had been any.

Bees will gather honey wherever it is to be found, and if cotton blooms, or any part of the cotton-plant afforded it, they would certainly lay up abundant stores during the months of June, July, August and September, but in my experience they do not; and Mr. Keith tells me his experience is the same.

Louisville, Ga. M. H. HOPKINS.

Hard Year—Crimson Clover.

DR. BROWN:—I have been in the bee-business for some time. 1895 has been the hardest year for me—about six pounds per colony covers my crop.

I see crimson clover spoken of for its value as a honey-plant. I wish to know where I can buy the seed.

Cedar Creek, Tex. T. V. DICKSON.

ANSWER.—Crimson clover seed is for sale by all first-class seedsmen. It would be to the interest of those having the seed for sale to advertise in the American Bee Journal.

A Texas Report—Cotton-Bloom.

DR. BROWN:—This is my second year with bees. They have stored only about 10 pounds of surplus honey this year per colony. I have 23 colonies of hybrids and blacks in movable-frame hives. I make my own hives and supplies, except sections. I have made some effort to Italianize my apiary, but owing to so many native bees in the neighborhood, I failed to get my queens purely mated.

We have had four light flows of honey this year, which kept the bees up all right. First, the fruit-bloom started them off nicely. Second, a honey-dew that they gathered some surplus from—a dark honey and sugar. Third, the linden, which the bees could not gather much from, owing to a continued rain all through the flow. Now they are gathering bitter honey, as they did last fall, from the bitterweeds.

One might think from the article on page 713, that cotton yielded a good honey-flow every year all over this State; but not a pound have I gotten in two years, while in this same county (Van Zandt), twenty-five miles west, my neighbor's bees got rich from it. Why doesn't cotton yield honey everywhere alike? S. P. BREWER.

Edom, Tex., Nov. 14.

ANSWER.—In answer to your question, "Why don't cotton yield honey everywhere alike?" I may ask, why are not the crops of cotton, corn, oats, potatoes, etc., alike in all parts of the same county? It is not alike, for the soil, amount of rainfall, and atmospheric and electrical conditions are not alike.

Every Present Subscriber of the Bee Journal should be an agent for it, and get all others possible to subscribe for it. See offers on page 801.

Canadian Beedom.

Apiarist and Bee-Keeper.

On page 759, Dr. Miller questions whether there is any well-grounded distinction between these two terms. He says "the dictionary" defines "apiarist" as a "bee-keeper," and wishes the "gentleman across the line" to tell us where he gets his definition for "apiarist." The reply is, from "the dictionary," *i. e.*, from *my* dictionary, which defines an "apiarist" as "one who keeps an apiary." An apiary means more than one or two forlorn bee-hives run by the rule of thumb, which is all many can show who must, I suppose, be called "bee-keepers," because they keep bees. "One who keeps an apiary," be it large or small, must be supposed to have a kind of establishment comprising, besides his colonies of bees, a lot of "fixins," such as supers, section-boxes, extractor, escapes, queen-cages, nucleus boxes, uncapping-knife, smoker, veil, possibly gloves, and if he clips his queens' wings, as the Doctor does, a delicate pair of scissors. The possession of these and various other appurtenances implies knowledge and skill in the use of them. I suppose "the dictionary," which means, in the Doctor's case, *his* dictionary and in my case *mine*, is very like "my doxy" and "your doxy," as a definition of orthodoxy and heterodoxy.

But I think the Doctor will agree with me that in the nomenclature of bee-culture we need a term that expresses more than the bare fact of keeping bees. If "apiarist" is not satisfactory, how would "apiologist" do? That means "a student of bees." Most assuredly, there is many a bee-keeper who cannot be properly styled "a student of bees." The necessity for some such distinction is constantly making itself apparent. For example, we find those who consider themselves masters of the pursuit in the habit of saying of this and that man, of whose abilities they have an indifferent opinion, "He is no bee-keeper." Perhaps the person spoken of has 50 hives of bees or more. If he has a solitary colony, he is a bee-keeper, so that the assertion made concerning him, is, in the literal meaning of it, a libel and a falsehood. Of course it is easy to use a qualifying adjective—*e. g.*, "he is a good bee-keeper," or "he is a poor bee-keeper," but still a single word that conveys the idea of a man being more or less skilled in keeping bees, would seem to be convenient, if not necessary.

The North American Bee-Keepers' Union.

The American Bee Journal of Nov. 28 contains the Report of the Amalgamation Committee appointed at the Toronto Convention to arrange the terms of union between the North American Bee-Keepers' Association and the National Bee-Keepers' Union. So far as the first-named organization is concerned, the action of the Committee appears to be final, said Committee having been appointed to "arrange the terms with full power to perfect the same." The only question remaining to be settled is whether the members of the National Bee-Keepers' Union accept the overture made them. This they will undoubtedly do, because it is a case of absorption, since nothing whatever remains of the other body save the one feature of an annual meeting.

The object of the North American was to promote the general interests of the pursuit of bee-culture, mainly by the discussion of apiarian topics for mutual improvement. The object of the Union was to defend the rights of bee-keepers against aggression. I quite expected that these two objects would be blended in the amalgamation scheme. Instead of this, the distinctive object of the North American Bee-Keepers' Association is dropped altogether, and only that of the Union retained. It would have been easy to have consolidated the two articles relating to the objects of the two organizations, in some such way as the following:

OBJECTS.

Its objects shall be to protect the interests of its members, to defend their rights, to form a bond of union for mutual protection, and to promote the general interests of the pursuit of bee-culture throughout North America.

Why this was not done is best known to the Committee.

There is also a conspicuous indefiniteness as to what interests of members are to be protected. Probably it will be said that their apicultural interests would be understood to be those intended, but it would have been better to have had the fact stated. Three times over, defence of rights and mutual protection are stated, surely the nature of the rights adverted to might have been mentioned once.

But what most concerns Canadian beedom, is the entire absence of all recognition of Canada, except so far as it is part of North America. In this respect it is only on a parallel with Mexico. The constitution of the old Association distinctly said: "This organization shall be known as 'The North American Bee-Keepers' Association,' and shall include in its territory all of the United States and Canada." All this has been struck out. There were three Canadians on the Committee who do not appear to have objected to their country being dropped in silence. They will have a chance to explain and defend themselves at the annual meeting of the Ontario Bee-Keepers' Association, in January.

The amalgamation scheme had, and has, no warmer friend and well-wisher than the writer of these lines. He sincerely regrets that he cannot speak more approvingly of the work of the Committee. The object aimed at—union, is good—excellent; but the splice might certainly have been made in a better and more artistic manner. The "high contracting parties" have not distinguished themselves by any large amount of diplomatic skill, constructive ability, or even-handed justice. Perhaps it is not too late to supply the omissions and remedy the defects which have been pointed out.

So much as has been said appeared to be demanded in duty to Canadian beedom.—[See page 797.—EDITOR.]

Evolution of Queen-Bees—Clipping Wings.

On page 747, Mr. Allen Pringle discusses my argument in opposition to the clipping of queen-bees. He approves of it so far as relates to the evolution of queens, but objects when their original creation is adverted to. I am amazed at his assertion that Evolution and Creation are opposing philosophies, for surely he is well sware that many of the best scientific authorities hold firmly to both. I think it was the eminent botanist, Dr. Asa Gray, who first pointed out that there was no necessary conflict between Creation and Evolution; that, in fact, Evolution was one of the most important laws of Creation.

Mr. Pringle dogmatically asserts that I cannot hold the two philosophies of Evolution and Creation. I don't consider them two philosophies. If they can be so properly regarded, then I firmly believe them both. I do not know by what right he assumes to grant me permission to have my choice of the two systems, but refuses to permit me to cling to both. It is, perhaps, because to his mind it seems impossible to hold both. But no such apparent impossibility troubles me. To me they seem entirely harmonious, and the one the natural and necessary counterpart of the other.

When man began to develop the queen-bee, flight was one of her essential functions. I call it an essential function because she had to transmit it to her progeny, or they would be useless for the main purpose of their existence, namely, to gather nectar and convey it to the hive. The "fine point" of my argument is this: That if the queen, by being deprived of her wings, comes under the operation of that law of Nature by virtue of which disuse of wings leads to deterioration, and finally extirpation of them, it may be that serious injury may be caused by the process of clipping.

So far as the *reductio ad absurdum* is concerned, I do not see that the cases cited are parallel. The dehorned stock are not unfitted for reproducing their kind by being deprived of their horns. If the horns should grow "small by degrees and beautifully less," it would be no detriment to the cattle tribes, but rather an advantage, at least in the eyes of those who go to so much trouble and expense in getting rid of them. The use of the knife on young male animals is merely carrying out Nature's law of the survival of the fittest. These inferior males are not permitted to reproduce their kind, because of unfitness for the exercise of the function. There is nothing in the idea of the creation of the "scrub" or the "crab" to imply that these crude forms are the best and cannot be improved upon, and it must be borne in mind that the means by which the "splendid Durham" and other breeds are produced, do not involve the extirpation of any function whatever, but only by selection of the best types the effort is made to secure the highest development possible of already existing and essential functions.

I have said that I not only consider Evolution and Creation harmonious, but as the necessary counterparts of each other. To conceive of Evolution without Creation is to provide no means of effecting improvement, for whence came the tendency to evolve and the power to do so? To conceive of

Creation without Evolution is to necessitate fixity of type. Perhaps this is what Mr. Pringle means by "special creation." As I understand the matter, I see no need whatever for the word "special" in this connection.

The discovery of the law of Evolution was a most valuable one. There was some hesitation about its general acceptance, because it was proclaimed to be irreconcilable with the idea of Creation. When the truths of geology were first enunciated, they were supposed to conflict with Bible teaching, but Genesis and Geology were reconciled long ago. We are going through a similar process now in regard to evolution. Evolution is still opposed by many who suppose that it is at variance with the Bible, and there is too much reason to fear it is accepted by many because it enables them to dispense with a Creator. To my mind, the idea of a Creator is indispensable to account for the executive power which is behind all Nature's laws, this of evolution among the rest. I cannot conceive of law enforcing itself. That which sceptical scientists call Force, is but another name for the Unseen Power which believers in a Divine Being call "God."

[First thing we know, this queen-clipping discussion will evolute into one on religious beliefs, etc. Probably no better place than this will be found to "clip" off the discussion. I think nearly all will agree that sufficient has been said thereon for the present.—EDITOR.]

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Locating an Apiary Near a Railroad.

Would it be good policy to locate an apiary close to a railroad, say 75 or 80 feet away? I. C.
Monticello, Ind.

ANSWER.—The main question, I suppose, is whether the jarring would disturb the bees in winter. I have read of one or more cases, but I don't know where to refer to them, and I can't say positively what was reported as to the result. My impression is that no harm came from the jarring, but I may be wrong about it. Perhaps some one who is situated near a railroad may be able to tell us about it.

Using Old Foundation.

As this has been a poor year for honey, I have some foundation left. If I should warm it thoroughly next spring, before using it, would it bring back the natural smell so the bees would work on it as well as new foundation? O. H.

ANSWER.—I have several thousand sections filled with foundation that I hope to use next year, and from the experience of the past I've no anxiety about the bees using it, and I shall not warm it or do anything with it, only just put it on the same as fresh. Some of the sections will be four or five years old, and none of them less than two years old. Fresh foundation is a little better, but I never could see such a great deal of difference. If the foundation was left on late in the season without being used, and the bees varnished it with propolis, then they'll not like to use it, but warming it will not help any.

Esparcet or Sainfoin—Krainer or Carniolan.

1. What is the English name for esparcet? In a former number of the Leipziger Bienen Zeitung, I find it highly recommended for bee-pasturage. Have you had any experience with it?

2. Are the "Krainer bienen" the same as our Carniolans?

I am asking for the foregoing information because, judging from some of your writings in the American Bee Journal, I think you are a German. Should I be mistaken, then of course I can't expect that you can give me the information wanted. H. C.

ANSWERS.—1. It isn't necessary, as you suppose, to be a German to be able to answer your questions, although I do happen to know something of that language. If you will turn to the word "esparcet" in the Standard dictionary, you will find it is sainfoin, the botanical name being *Onobrychis sativa*. Then turning to "sainfoin," which is really French (but the name in common use in America and England), you will find it is "An Old World perennial clover-like herb of the bean family, with odd-pinnate leaves and elongated spikes of variegated flowers, cultivated extensively in Europe for forage." It is also known in England as "cockshead." I know nothing about it personally, and I think it is little known in this country.

2. Krainer and Carniolan are the same.

Rearing Queens—Golden vs. Leather-Colored Bees.

1. I would like to rear a few queens next season for my own use. Could I take the old colony and divide, say in two or three nuclei after the first swarm issued? There always seems to be plenty of queen-cells. What would be the best way to do it?

2. Which do you think are the best bees, the golden or the leather-colored?

I should have said in the first question that we do not have any fall flow of honey here. H. G.
Olymphia, Wash.

ANSWERS.—1. Yes, there need be no great difficulty in the matter. Just put the contents of the parent colony into two or three hives after hiving the swarm on the old stand, dividing the brood and bees, and making sure that at least one good queen-cell—preferably a sealed one—is in each hive. But you must feed them to have them ready for winter, and even then they may be pretty weak. Commence the feeding early.

2. There are good and poor in each, but on an average I'd risk the leather color.

Two Big Nuisances.

DR. MILLER:—As you are a good one to answer questions, please answer the following through the Bee Journal: Which is the greatest nuisance in a neighborhood—a man that will occasionally help himself to a few frames of honey, or a man that will do business under a fictitious name, and praise up a certain locality as a paradise for bee-keeping; get a few bee-keepers to locate there, buy their first season's honey crop, and when asked for the money five months afterward, puts on a satanic grin and says he was never so hard up before; and has the name of beating every one that he gets a chance at? The Bible says, of two evils choose the least. Which of the two is the least, and which is the greatest nuisance?

SOUTHWESTERN TEXAS.

ANSWER.—I'm inclined to think neither one is least. They're are both big nuisances. But if you insist on me applying my measuring-stick, I should say that the sneak-thief who comes in the night and gets away with a few frames of honey isn't near so big a nuisance as the other, and wouldn't make me feel half so mad every time I'd think of it. It's all the more aggravating because you suffer more loss from him than from the sneak-thief, and yet the law won't shake him by the coat-collar as it will the lesser villain. I have some doubts as to the wisdom, however, of choosing the least of two evils. I'd rather reject both. Are you sure there's any such advice in the Bible?

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Now is the Time to work for new subscribers. Why not take advantage of the offers made on page 801?

Among the Bee-Papers

SOME "STRAY STRAWS" FROM GLEANINGS.

Hasty says in Review that "a hive needs a *visible* number on it no more than a toad needs a tail." Which makes me think, in view of the confidence I put in Bro. Hasty's judgment, that I may have underestimated a toad's need of a tail.

The editor of the American Bee-Keeper, after attending the Toronto convention, says: "Any one can find fully as much to interest him in almost any single copy of any of the bee-papers as was heard during the entire convention." Pretty poor convention that, measured by some of the bee-papers. [The editor of the American Bee-Keeper has not been at bee-conventions enough, or kept bees enough, to form a proper opinion, I suspect.—EDITOR.]

York and Hutchinson are favoring a trial of having the North American meet at the same time and place as the G. A. R. That would make low rates sure, and we can stand almost any inconvenience if we can only have railroad rates low enough. [I am with York and Hutchinson. In order to get any kind of attendance we must have it held where low rates will be secured independent of the bee-convention. This 1⅓-fare business, as Hutchinson says, amounts to nothing.—ED.]

FOUNDATION WITHOUT SIDE-WALLS.

In writing about foundation there has been much stress laid upon high side-walls. Last year I experimented by making 250 sheets of brood foundation with *no* side-walls. I made the sheets thin, then set the rolls so as to just shape the cell-bottoms, leaving all the wax in the septum. These sheets were put in wired frames and waxed firmly to the top-bars, and I have a lot of the nicest, straightest brood-combs I ever owned, the cost being only 35 cents per hive.—B. TAYLOR, in Review.

SWEET CLOVER.

Replying to a question as to whether sweet clover yields every year, I would say that no honey-plant gives nectar every season. All of them seem to have their off-years. Yet sweet clover, so far as I can remember, yields some honey every year; in fact, it seems to be more regularly visited by the bees every season than any other plant with which I am acquainted. Yes, stock eat it; but they have to learn to like it; and when they once acquire the taste for it, they will sometimes browse it down in preference to anything else. It is a biennial. It springs up the first year, but does not yield honey until the second season, and then is visited by the bees from that time until frost, when it is killed. See fuller particulars in regard to this in the "A B C of Bee-Culture," under the heading of "Clover."—Gleanings.

THE NORTH AMERICAN AND THE UNION.

I'm looking for good to result from the action at Toronto with regard to the North American and the Bee-Keepers' Union. Rev. W. F. Clarke is right in saying the North American has always been local—at least nearly right—and it always will be mainly a local affair just so long as it it is so managed that only those who attend have any inducement to become members. So far the effort has been to secure attendance, not membership. That must be entirely changed if it is ever to be anything more than a local affair. When comparing the membership of our societies with that of societies across the sea, it has been the custom to say that the great distances in our country preclude the possibility of having a large membership. That's all bosh. A man may be a member without attending; and if he doesn't attend, its just as easy for him to become a member a thousand miles away as a hundred.

But I confess I don't understand Mr. Clarke when he says the North American has always been a "primary class of bee-keepers." I wish he would explain what he means. Is it the character of the men who have been in attendance, or is it the character of the discussions and deliberations that makes him classify it as he does? If the latter, what change would be recommended to make it "a high court or parliament of bee-keeping?"

At Toronto, Mr. Clarke said of the North American, "When we get down so that we have to pay only 25 cents a year I don't want to belong to it." Why? I think both Mr. Clarke and myself have got down so we don't have to pay even 25 cents a year. Is that any reason we do not want to belong to it?

Mr. Newman thinks nothing will kill a society sooner than an insignificant membership fee. A small fee doesn't seem to have killed the many societies in foreign lands. What do we want of a fee larger than sufficient to pay expenses? He says: "The Bee-Keepers' Union is respected, not because it has a membership of 300 or 400, but because it has a good bank account." Part of that is true. It is respected for its bank account, and that respect is neither increased nor diminished by the fact that the amount in the bank came in large or small sums. But the intimation that numbers count for nothing is hardly correct. An organization of 1,000 receives, as a rule, more consideration than one of 100. Now, suppose the membership is increased from 300 or 400 to 600 or 800, and the membership fee cut in two, leaving the bank account the same, will not the larger membership with the same bank account have just a little more respect?—DR. MILLER, in Gleanings.

BEE-KEEPING IN NEVADA.

Mr. W. K. Ball, of Reno, Nev., came up with a carload of honey—that beautiful alfalfa that is pronounced by every one who tastes it the finest-flavored honey in the world. It is beautifully rich and thick—so thick, indeed, that it is fairly waxy. In answer to my question as to what kind of season he had had, he said it had been rather poor with him for the last two years.

"Rather poor?" said I; "and what was your average?"

"About 150 pounds, extracted."

Neighbor Chase, who stood by, turned to me with a smile, and said that, if he could average 50 pounds, to say nothing of the 100, in good years, he would be satisfied. You see, Mr. Ball depends upon alfalfa that is watered by irrigation. The problem of wet and dry seasons is one that they do not have to contend with. The amount of moisture is regulated artificially by man, and you might almost say the flow of nectar from alfalfa, lasting for three months, is regulated in the same way.

A few years ago Mr. Ball thought the locality could not be overstocked; but in later years a good bee-range there is pretty well stocked with bees already. But there are portions of Colorado (Brush, Morgan Co., for instance), so Mr. Ball tells me, that sell from $20 to $40 an acre, with water, that would do just as well. Here they get three cuttings of alfalfa per season. It is as fine a grain country as he ever saw.—Gleanings.

HONEY AS FOOD AND MEDICINE.

One of the most nutritious and healthful of foods is honey. It is the one sweet that never cloys, and can be eaten with impunity at all times. The markets are now flooded with the white clover honey from up the State, and the delicious California honey from the orange-blossom. Let your children eat all the bread and butter and honey they want. Give them great slices of bread covered with honey for their luncheons. It will do them good. From the time the new honey begins to come into the market until spring, I feed my children honey every day, says a mother. If they have a little cold or cough and trouble with their throats, I give them extracted honey mixed with a few drops of lemon-juice, and it proves most effectual. When they are hungry I give them a generous slice of bread and butter covered with honey, and they never get sick, as they would eating sweet-meats, jellies and jams. From long years of experience I feel justified in recommending honey as an excellent and nutritive food, not only for children, but for grown people.—National Stockman.

MUCH ROOM FOR THE BREEDING SEASON AND LESS DURING HARVEST.

Says O. O. Poppleton in Gleanings: "I have watched with some interest whatever has been written on the hive question; and will you allow me to call special attention to what is one of the most valuable points brought out as yet? As you know, I use mainly, for extracting purposes, a large single-story hive in which I can add to or take from the bees one or any number of frames at any time. The few thousands of pounds of comb honey I have taken has been mostly done by giving the bees all the combs they could use in the breeding-season; and then when giving sections I take away all combs except the 8 which contain the most brood? In my mind there is no question whatever that this method gives a larger yield of honey than if only an 8-comb hive is used, or even a 10-comb, if the 10 are kept in use all the season. My experience leads me to think that more than 10 frames during the breeding-season is preferable with most colonies, to using only 10. If I were to rig up for comb-honey producing, I would use either a 16-frame single-story hive or double 8-frame hives, cutting down in either case to the best 8 combs when putting on sections. The possible drawback to this method is that it may tend to increase swarming; but such did not seem to be the case in my experience. It would take a careful comparison of the two methods in the same apiary to determine that point."

The American Bee Journal
ESTABLISHED IN 1861
OLDEST BEE-PAPER IN AMERICA

George W. York, - - Editor.

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Editorial Budget.

Mr. Bert Cook, of Otsego, Mich. (son of Prof. A. J. Cook), recently visited Gleanings. He is reported to be making a great success of farming.

Dr. Miller attended the 29th annual meeting of the Northern Illinois Horticultural Society, at Sterling, Ill., Dec. 3 and 4, of which he has been President the past year.

Mr. Byron Walker—the great Michigan honey-man—has finally arrived in Chicago for the winter, and has begun business. He will deal in strictly fine honey—both comb and extracted—wholly on a cash basis, and not on commission. Mr. Walker's own crop, this year, was some 30,000 pounds, practically all being extracted.

The Bee-Keepers' Review has been forced to be late recently, on account of the very severe and long-protracted illness of Editor Hutchinson's daughter Ivy. Were it not for the aid of his two eldest daughters in the printing office, Bro. H. says he would be almost "swamped." But now he hopes soon to be caught up, when all will be well again. Surely, he has the sympathy of every one in this trying time.

The Ontario Agricultural and Experimental Union will hold its 17th annual meeting at the Ontario Agricultural College, Thursday and Friday, Dec. 12 and 13. Mr. R. F. Holtermann, the Secretary of the Union, will deliver an address on "Tests with Five-Banded Italian Bees." A very complete two-days' program is arranged, and it will pay all who can do so, to attend. Guelph is the place of meeting.

Sorting Comb Honey.—Wanting a little comb honey recently, I went to one of the commission firms here in Chicago, and selected a crate, taking it upon its appearance through the glassed end. The two exposed sections, I found upon opening the crate, were very full, nice and white, while the balance were anything but well-filled, and, besides, were not at all like the two front sections in color.

In addition to the above deception, there were two sections in which the comb was only about half filled, worth perhaps 5 cents each.

Now, when a grocer, or any one else, buys what he thinks is fancy honey, and pays a good price for it, he ought to get just what he expects and pays for. My own experience, as above given, shows that some one is not doing the square thing. I do not know what bee-keeper crated the honey I bought, but whoever it was, he will crate, sort or grade, no more for me.

I do not think the producer of the above crate reads the Bee Journal, or he would know better than to put up a job lot of honey in the style mentioned. Unless a bee-keeper wishes his character to be judged by the way he puts up his honey, he ought to be careful. Outward appearances are very often deceptive, and yet it frequently happens that no other opportunity is offered for judging. So it behooves producers to be careful that the whole of a crate of honey shall be pretty nearly equal to the part shown through the glass. Otherwise disappointment to the purchaser, and perhaps future loss of patronage may result. Honesty and fairness should characterize all our actions—even to putting our productions upon the market.

The Chicago Convention—January 9 and 10—promises to be an interesting one. Mr. Ernest R. Root—the bee-editor of Gleanings—fully intends being here. And Dr. Miller writes thus: "I expect to be there with my whole family." That means, besides the Doctor, his good wife and Miss Emma Wilson.

Now, I wish that all who will try to attend the Chicago convention, would please let me know soon, so that I can mention it in the Bee Journal. Why not every bee-keeper who is within at least 200 miles make arrangements to come. Let it be equal in numbers to the World's Fair convention; then the interest and profit resulting will take care of themselves.

Who expects to be here Jan. 9 and 10?

See the convention notice on page 802 of this number for information as to railroad rates, etc.

"Bee-Keeping has reached a stage where not many startling inventions need be looked for"—so says Editor Hutchinson in the last Review. Also, "The really 'new and useful' things in bee-keeping now-a-days are few and far between." If such be the case, what folly it is for any to think of throwing their hard-earned money away on starting and publishing new bee-papers! In the light of past experience, a new bee-paper is about as risky a thing as any one can invest in. Probably as many as 50 of them have been started the past 30 years in North America, and nearly all of them have been compelled to give up.

Friends, please don't look this way for any encouragement in starting new bee-papers, for I really think too much of my good friends to want them to throw away their money, either in trying to publish new papers or in subscribing for them.

Please Renew Your Subscription.—We know we are making the American Bee Journal, in all respects, a better paper than ever before, and we feel that our many thousands of readers appreciate our efforts and desire to remain with us during the coming year. We ask as a special favor that all who can will send in their renewals *early*, instead of waiting until the last copy due is received, and thus save us the great rush that causes delays and mistakes just at the close of the year.

The question of renewal of subscription to the American Bee Journal may come up for consideration or discussion with some, and various reasons may be suggested against it, such as scarcity of money, an inclination to try some new paper, an idea that enough has been learned already, that it takes too much time to read, that too many papers are taken now, etc. Before deciding not to renew your subscription to the Bee Journal, ask yourself how less than two cents a week can be better expended, even if money is scarce, and if it is not

almost as certain to make or save you more than its very small cost in a whole year.

Before you decide to try some new bee-paper, or let some agent induce you to do so, get a sample copy of the proposed new paper, and give it a careful, considerate comparison with the American Bee Journal, and we will cheerfully abide by your conclusion. Neither a bee-keeper nor his family can read all the time and prosper, but in the present age of rapid improvements and rapid changes, no bee-keeper can expect to succeed without carefully reading at least one good, reliable, enterprising bee-paper. If too many papers are taken, simply give the American Bee Journal the consideration it deserves before letting it discontinue.

We ask for no charity. We appreciate and admit that the paper giving most actual value for the price, is the one that should be patronized, and clearly, on this principle, we make our plea, and with confidence in the intelligence and appreciation of our constantly growing family of readers. We have no fears as to the result. We simply promise that there shall be no weakening nor retarding tendencies in the conducting of this paper. If expenditure, thought and unremitting effort can make it better, more instructive and interesting, such it will and shall be made.

When sending your own renewal, why not also include the subscriptions of your bee-keeping neighbors, and thus earn some of the many liberal premiums we offer in the Bee Journal for getting new subscribers? Try it. You will feel better for having done both them and yourself a good turn.

Wishing you prosperity and long life, we are,

Sincerely yours,

GEORGE W. YORK & Co., *Publishers.*

The Central Iowa Convention, to be held Dec. 26 and 27, at Oskaloosa, ought to be well attended. The advance program contains some interesting topics, among them being these:

Is the breathing of the vapors arising from a colony of bees, while being handled, detrimental to health? Discussion.

What is the effect of bee-stings on the human system?—Hon. Eugene Secor, of Forest City.

Would it be advisable for the State to carry on an experiment apiary?—Hon. J. A. Garner, of New Sharon.

Can bee-keeping be made profitable in Iowa?—George Delong, of Beacon.

Does it pay to extract honey?—S. L. Sherman, of Oskaloosa.

What is the cause of spring dwindling?—George Briggs, of New Sharon.

Can we develop the honey-bee beyond the natural state in which we find it?—C. E. Woodworth, of Colfax.

What causes the production of nectar in flowers?—Edward Bevins, of Des Moines.

Are queens always impregnated in the air? If so, do they ever leave the hive afterwards, except with swarms?—Jos. Nysewander, of Des Moines.

Upward Ventilation.—"In the district of Altmark, in the province of Brandenburg, the hives in common use are made of straw, with the entrance for the bees placed invariably about three inches from the top. It is three inches long and half an inch high. Bees are said to winter extremely well in these hives."—American Bee Journal for 1861.

How is this for upward ventilation?

That New Constitution for the proposed North American Bee-Keepers' Union has already had some few changes made in it since it was first published on page 757. In order that the changed parts and additions may the more readily be seen, in republishing it now I have put them in italics. As now submitted, it is thus:

ARTICLE I.—NAME.

This organization shall be known as the "North American Bee-Keepers' Union," and shall hold meetings annually at such time and place as may be designated by the Board of of Directors, due notice being mailed to all members at least 60 days previously, and published in the bee-periodicals of the United States and Canada.

ARTICLE II.—OBJECT.

Its object shall be to protect the interests of its members, to defend their rights, and to *disseminate apicultural knowledge among the people.*

ARTICLE III.—OFFICERS.

SECTION 1.—The Officers of this Union shall consist of a President, Vice-President, Secretary, Assistant Secretary and Treasurer, whose duties shall be those usually performed by such Officers. These Officers shall be the Board of Directors.

SEC. 2.—The Secretary shall be General Manager, and shall have charge of the executive work of the Union, under the advice of the Board of Directors.

SEC. 3.—The Officers shall be elected by ballot, and hold their several offices for one year, or until their successors are elected and qualified.

SEC. 4.—Nominations for Officers shall be sent to the General Manager before the first day of November in each year, who shall cause the same to be printed in the bee-periodicals—and shall be printed and mailed by Dec. 1, with the necessary Ballots, to every member who paid dues for the previous year.

SEC. 5.—The Treasurer shall furnish a bond of $2,000 (*to be approved and held by the President*), for the faithful accounting of the funds of the Union, and shall pay out the funds only on vouchers signed by the President and Secretary.

SEC. 6.—The terms of office shall be for the calendar year, and the polls shall close on the last day of December.

SEC. 7.—Each annual meeting shall, by majority vote, elect a Chairman and a Recorder from those present, to preside over the meeting, and prepare a suitable Report of the Proceedings for publication in the bee-periodicals as soon as possible after the close of the meeting. Any member (whether an officer of the Union or not) shall be eligible to these positions.

ARTICLE IV.—BOARD OF DIRECTORS.

The Officers shall constitute a Board of Directors, which shall determine what course shall be taken by this Union, upon any matter presented to it for action; and cause such extra Assessments to be made upon the members as may become necessary; provided that only one Assessment shall be made in any one fiscal year, without a majority vote of all the members (upon blanks furnished for that purpose), together with a statement showing good reasons for another Assessment.

ARTICLE V.—MEMBERS.

Any person may become a member by paying to the General Manager an Entrance Fee of $1.00, for which he shall receive a printed receipt, making him a member of the Union, entitled to all its rights and benefits until the 31st day of December, following. The Annual Fee of $1.00 shall be due on the first day of January in each year, and MUST be paid within *six* months in order to retain membership in this Union.

ARTICLE VI.—FUNDS.

SEC. 1.—The Funds of this Union shall be used for any purpose in the interests of the pursuit of bee-culture, when approved by the Board of Directors; and to pay the legitimate expenses of the Union.

SEC. 2.—The Salary of the General Manager shall be determined by the Board of Directors, but shall not be more than twenty (20) per cent. of the gross income for each fiscal year.

ARTICLE VII.—AMENDMENTS.

This Constitution may be amended by a majority vote of all the members; provided that all proposed amendments shall be presented in writing, signed by three members, and sent to the General Manager before the first day of November, so that they may be incorporated into his Annual Report.

In the November Bee-Keepers' Review, Editor Hutchinson remarks as follows about the foregoing Constitution:

"If the New Constitution is adopted, the two societies become one.....I see no fault to find with it, and if I saw any I should certainly point it out. I feel hopeful that good will come from the union of these two organizations."

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Closed-End Frames.—"Closed-end frames, accurately made and held together so as to present a smooth surface to the bees, are easy to handle and have several advantages of their own, of which, perhaps, the most important is, that, in wintering and breeding up in the spring, the heat of the cluster is confined to the comb-spaces which it occupies." —F. L. THOMPSON, in Gleanings.

Is not the heat of the cluster confined to the "comb-space which it occupies" on any kind of a frame? I confess I am unable to see where a closed-end frame has any advantage in this respect. The cluster warms the comb-space which it covers, and no more, let the frame be what it may. Or at least that is the way it seems to me.

Cheap Honey—Practically Not True.—"Why is honey so cheap? Because much of it that is sold is nothing more than molasses."—From an article in Farmers' Review, signed, H. W. Wiley.

The article entitled "Adulteration of Honey," from which this extract is quoted, occupies about a column of the paper, and contains in addition to the above, a number of what seem to me very unwarrantable statements, to say the least. I should be glad to think that there is some mistake about this, and that Prof. Wiley is not the author of the article. I formed a very favorable impression of that gentleman when I met him in Chicago at the World's Fair bee-convention, and I have great respect for his ability, but this does not change the facts in the case. It is not true that honey is cheap because much that is sold is "nothing more than molasses." Honey is now being offered in Arizona, through one of the prominent bee-papers, for 4½ cents for extracted, and I can buy as pure honey as ever the sun shone on, laid down here in St. Joseph, for 6 cents.

The truth of the matter is, everything is very cheap, and honey, being considered a luxury, has been neglected by the people during these close times, and, for this reason, it has become very cheap.

Neither do I believe that "much of the honey sold is nothing more than molasses," Prof. Wiley to the contrary notwithstanding. I have examined a great many samples of honey in my time, and I have the first one yet to see that would answer to this description. I have found some which was largely adulterated with glucose, put up by unprincipled mixers, but there is not nearly as much of this as some would have us believe.

Prof. Wiley takes special pains in the article referred to, to tell how honey is adulterated, which, instead of resulting in any good to bee-keepers, is only a hint to some unscrupulous person to set up business according to his methods. "The brand, 'American Honey,'" says he, "is now a sign of adulteration." Prof. Evans told the American people, through the Popular Science Monthly, some time ago, that there was very little pure honey found in the market on the other side of the water. So, between the two noted scientists, it would seem there is little show for pure honey any place. Now, I would ask in all candor, what benefit are the bee-keepers to derive from publishing such stuff in the agricultural papers of the country? The Government has done comparatively little to aid apiculture, and it seems to me that it should at least stop injuring it by the misdirected zeal of the official chemist. If it cannot find any better employment for him than the promulgation of such misleading statements, it would better abolish the office altogether. Of course, this is only my individual opinion, and should be taken as such.

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We have made arrangements whereby we furnish **Basswood, White Sage** or **Alfalfa** Extracted Honey, in 60-pound tin cans, on board cars in Chicago, at these prices: 1 can, in a case, 8½ cents per pound; 2 cans in one case, 8 cents; 4 cans (2 cases) or more, 7½ cents. Cash MUST accompany each order.

☞ A sample of either kind of honey will be mailed to an intending purchaser, for 10 cents, to cover postage, packing, etc. We guarantee purity, and that what we ship will be equal to sample.

Now it seems to us that here is a splendid chance for any bee-keeper to supply his home demand after his own crop is all sold. Or, why not begin now to create a local honey-trade? Order one 60-pound can first, and start out among your neighbors and friends, and see what you can do. You ought to get at least 15 cents per pound in 5-pound lots, or 50 cents for 3 pounds. Some may be able to do even better than that, though we think that enough ought to be sold at these prices to make a fairly paying business out of it. Give it a good trial. Push it. It may grow into a nice winter's work for you.

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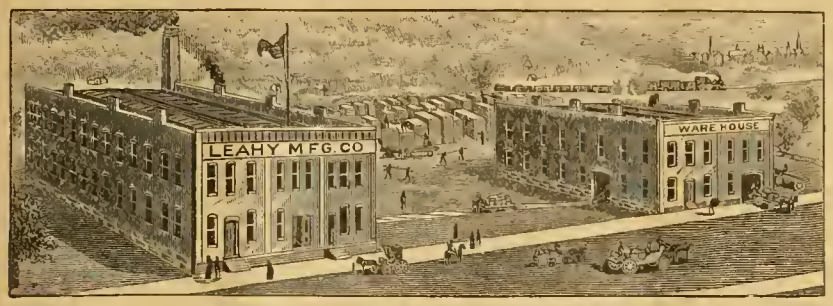

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Dear Sirs:—The Sections arrived in due time, and are all O. K. so far as examined. They are simply perfection. I can't see how you can furnish such goods at such low prices. I hope you may live long and do well. Yours respectfully, Z. S. WEAVER, Courtney, Tex.

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For the Season of 1895-96. We have made preparations to store Comb Honey in Any Quantity. This is our Fifth Year as a

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We received 812 Shipments last year. We kindly solicit the business of our friends of former years, and a Trial Shipment of all Bee-Keepers in the Country.

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Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

How Close to Each Other May Hives Safely be Placed?

Query 998.—Having limited yard room, how far from center to center is the closest I can place my colonies of bees with safety?—P. S.

G. M. Doolittle—Four feet.

W. R. Graham—About 6 feet.

C. H. Dibbern—Leave enough room so the bees cannot run from one hive-bottom to another.

P. H. Elwood—I don't know. It depends largely how you work them. If not disturbed much, they can be closer.

Mrs. J. N. Heater—I would not have less than four feet from center to center, and then paint the hives different colors.

W. G. Larrabee—I should say six or eight feet, but I would advise having two or three in a clump, and then a larger space.

Mrs. L. Harrison—I like to place in pairs, as closely as they can be placed. I never had any trouble when they were placed closely in rows.

Prof. A. J. Cook—If of various colors, or marked by trees, etc., as close as they can be and permit you to get among them so as to handle the bees, etc.

Chas. Dadant & Son—You can place them side by side, but should have some conspicuous mark, or different color, by which the bees may recognize their home.

Eugene Secor—They may be placed closely side by side, but in that case I think I would color the fronts of the hives differently, or distinguish them in some manner.

R. L. Taylor—That depends. If there are trees or other landmarks in the apiary, and you face neighboring hives in different directions, you may safely place them as close as you please.

Rev. M. Mahin—You can safely put them as close together as they can be placed, and have room to put on and remove the covers. I have had them that close without any injury in any way.

Rev. E. T. Abbott—Safety to what? There will not be any trouble one time in a hundred, if the hives touch each other in the rows, so far as the bees are concerned, if the rows are four or five feet apart.

J. A. Green—Place your hives in groups of four, two facing east and two west with a space of one foot between. Three feet north or south put another group. Five feet east or west make another row of groups.

G. W. Demaree—You may place your hives as close as you can conveniently work among them. I have a friend bee-keeper, in a town, who worked his hives one above the other for want of room. The notion often advanced that hives located too close together endangers the young queens in their wedding flight, is all *theory*. The only danger that can arise on that account is the very rare occurrence of two young queens going out at the same time from adjoining

hives. The excited movement of the workers at the entrance of the hive in the interval of the absence of their young queen is a sure guide to her on her return.

J. M. Hambaugh—By alternating different-colored hives, you can keep your bees 4 to 6 feet apart; yet I would prefer a greater distance. In close quarters, bees should have a variety of colors, markings, etc., to guide them to the proper hive.

B. Taylor—In my house-apiary the entrances are two feet apart. This year I tried getting young queens fertilized in these, and succeeded in every case. There is no other objection to placing hives two feet apart, except convenience in handling.

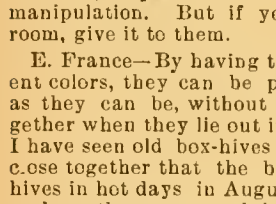
Dr. C. C. Miller—That depends upon surrounding objects as landmarks. With plenty of these, I should say there ought to be no trouble at six feet from center to center. But you can double the number kept on a given space by keeping the hives in pairs.

Dr. J. P. H. Brown—If space is *very* limited, you might place your hives as close as six inches. In fact, I have seen large apiaries where the hives were placed side by side and piled on top of each other, that were worked successfully and profitably.

J. E. Pond—I have found no difficulty in placing hives 10 to 12 inches apart. A foot of space between hives I deem to be ample, if care is taken. If bees are kept in a "slip-shod" manner, they will give trouble no matter how they are placed on their stands.

Allen Pringle—If you have various landmarks, and paint your hives, like Joseph's coat—many and different colors—you might place them side by side in touch in the rows, and the rows just far enough apart to admit of convenient manipulation. But if you have more room, give it to them.

E. France—By having the hives different colors, they can be placed as close as they can be, without clustering together when they lie out in hot weather. I have seen old box-hives on a bench so close together that the bees hid all the hives in hot days in August. But when cool weather came, and the bees all went in, some of the hives were left without bees. No doubt they had become queenless.



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Convention Notices.

WISCONSIN.—The annual meeting of the Wisconsin State Bee-Keepers' Association will be held Thursday and Friday, Feb. 6 and 7, 1895, in the capitol building at Madison. The program will appear in due time.
Platteville, Wis. N. E. FRANCE, Sec.

PENNSYLVANIA.—The Venango County Bee-Keepers' Association will hold its 3rd annual convention in the City Hall, at Franklin, Pa., Friday, Dec. 27, 1895, beginning at 9 a.m. All persons interested in bee-culture are cordially invited to attend. O. L. GREENLEE, Sec.
Utica, Pa.

TEXAS.—The Southwest Texas Bee-Keepers' Association meets at Wharton, Tex., at the apiary of W. O. Victor, Dec. 26 and 27, 1895. Everybody is invited and bee-keepers especially. Come, and let's have the largest meeting Texas ever had. Low rates on all railroads. J. O. GRIMSLEY, Sec.
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W. G. GARTSIDE, Sec.
289 Globe St., Providence, R. I.

The Special Meeting of the Illinois State Bee-Keepers' Association will be held in Chicago, at the New Briggs House, northeast corner of Randolph St. and Fifth Ave., on Thursday and Friday, Jan. 9 and 10, 1896—the week of the National Cycle Show—when excursion rates will be given on the certificate plan—for 1½ fare for the round trip. Certificate must be secured at the starting point, or no reduction will be granted on return. Before return ticket is secured, certificate must be signed by the Secretary of the Cycle Exhibition Company, and vised by the joint agent of the railway lines, whose offices will be in the Exhibition Building. Tickets to Chicago may be purchased (and certificate taken), on any day between Jan. 1 and 11, and the return trip commenced on any day between Jan. 4 and 15. Chicago hotel rates are 75 cents each, per night, two in a room; $1.00 if one in a room. Meals extra—pay for what you order, or go elsewhere for meals, if preferred.
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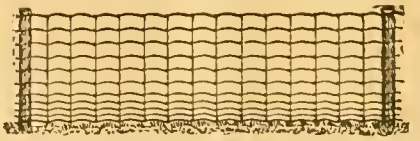

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CHICAGO, ILL., Oct. 16.—We never had as good inquiry for honey as this fall, and never sold as much. We have not received as good prices owing to the amount of California stock unloaded on this market, which was sold at a very low price, both comb and extracted. We quote: No. 1 and fancy, 13@15c.; amber and dark, 8½@11c. Extracted, 5@7c. Beeswax, 28c. J. A. L.

BUFAALO, N. Y., Oct. 14.—Honey is in good demand. We quote: Fancy, mostly 16c.; choice, 14@15c.; buckwheat sells slowly at 10@12c. Extracted very quiet. Will advance liberally upon all choice shipments of honey. Beeswax wanted at 28@30c. B. & Co.

CHICAGO, ILL., Nov. 7.—Comb honey, if fancy in all ways, sells at 15c., but the bulk of sales of white comb that grades No. 1 is sold at 13c. Amber or yellow brings 9@11c.; dark and brown, 8@10c., according to finish and flavor. There are large offerings of extracted at prices ranging from 4½@7c., according to color, body, flavor and package. Beeswax, 28@30c. R. A. B. & Co.

CINCINNATI, O., Nov. 20.—There is a fair demand for comb and extracted honey, with a good supply. Comb honey sells at 12@15c. for best white, in a jobbing way. Extracted brings 4@7c. on arrival.
Beeswax is in good demand at 22@27c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, MO., Nov. 21.—The demand for comb and extracted honey is improving. We quote: No. 1 white, 1-lbs., 13@14c.; No. 2, 12@13c.; No. 1 amber, 12@13c.; No. 2, 10@11c.; dark, 8@10c. Extracted, white, 6@6½c.; amber, 5@5½c.; Southern, dark, 4@4½c. Beeswax, 22@25c. C. C. C. & Co.

NEW YORK, N. Y., Nov. 8.—Demand for comb honey is very good, particularly fancy white, and is moving out about as fast as it arrives. We quote: Fancy clover, 1-lbs., 15@16c.; white, 13@14c.; fair, 11@12c.; buckwheat, 10@10½c. Extracted, buckwheat, 5@5½c., with supply equal to demand; white clover and basswood, 6@7c., with supply short and demand good; Southern, 50@55c. per gallon. Beeswax, 27@29c.; extra fancy, 30@31c. C. I. & B.

ALBANY, N. Y., Nov. 9.—Our honey market is in good shape, although prices, like on most all products, are not high; but receipts are lighter than last year, and there is a good, steady demand, with a real scarcity of white honey. We quote: White clover, 15@16c.; mixed clover, 12@14c.; dark clover, 9@11c. Extracted, white, 6½@7c.; mixed, 5½@6c.; dark, 5@5½c. H. R. W.

NEW YORK, N. Y., Nov. 22.—We have a good demand for white comb honey, all styles, and it finds ready sale at 14@15c. for fancy, and 12@13c. for second grade. The demand for buckwheat comb is rather limited and has fallen off considerably. The supply is large and the market shows a downward tendency. We quote: In paper boxes and glassed, 10c.; unglassed, 9@9½c. Extracted is not moving very fast and the supply is plenty, especially from California. We quote: White clover and basswood, 6c.; California, 5@5½c.; Southern, 50@55c. per gallon. No demand as yet for extracted buckwheat. Beeswax in good demand and firm at 29@30c. H. B. & S.

PHILADELPHIA, PA., Oct. 23.—Honey is selling freely, and good, choice comb sells on arrival. Pure Western extracted white clover sells very quickly and is in big demand. We quote: Fancy white clover, 16c.; choice, 14c., dark, 11c. Extracted, 5½@6½c.; pure white clover, 8@9c. Beeswax will not, in our judgment, advance much more, as it did last year, large quantities having been laid up at low prices. It sells fairly well at 26c. on arrival.
W. A. S.

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General Items.

Had a Good Season.

We have had a good season here. Our bees stored plenty of boney, and were all in good condition for winter.

E. B. HUFFMAN.

Homer, Minn., Dec. 2.

Too Dry for the Flowers.

You want to know how my bees are doing? Not very well. May be they will get through without feeding, but I will have to feed in the spring. I am well satisfied. I had 300 pounds of basswood honey; that was all the bloom that yielded any surplus. It has been so dry that there were no flowers to do the bees any good. I have 39 colonies, and had no swarms for two years. If it stays dry much longer, they will forget how to swarm.

Viola, Iowa, Dec. 2. D. C. WILSON.

A Successful Bee-Hunter.

My experience this year is easily told. For five weeks of hunting bees I have 10 colonies in fair condition. I fed a good part of the boney I took from the trees, but have 150 pounds left.

I am very fond of honey. I love my bees, and also the Bee Journal. Why shouldn't I, when I get enough information from each number to more than repay my subscription?

I am very much interested in the discussion of the size of the brood-chamber. I think the large-hive people have decidedly the best of it, and I will very likely adopt a larger hive next summer. My bees are at present in 8-frame Simplicity hives.

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Bakersfield, Calif., Nov. 23.

Bees Did Well—Prickly Pear.

The first frost came here on Nov. 19. It found our bees in fine condition. They have done well throughout southwestern Texas, and we have some honey yet to spare. All kinds of stock look well—in fact, are fat. Our forage crops are unusually good. This is strictly a bee-country; we seldom ever find any one living on our streams but what has bees. We look for a good honey-flow the coming year, as we have now a good season in the ground.

I do not now remember ever seeing bees working on prickly pear blossom, but they work on the apples when the honey-flow is poor. The honey is nearly the color of blood. Prickly pear is all over this part of the country. I see this was asked about on page 753. A. W. LAMKIN.

Batesville, Tex., Nov 25.

Peculiar Season—Honey-Dew.

The season of 1895 was a very peculiar one here, but it was a pretty fair one, after all. I did not get much white honey, but the most of the white honey I did get was from the soft maples. I never saw my bees gather so much honey from the maples as they did last spring. But when the clover came into bloom, it was a very cool, windy time, and it was very dry. When the basswood bloomed I got only three days, and the rest of the time the wind blew very hard, so I did not get much white honey.

About Aug. 1 I noticed that the bees were getting some honey, and they all went mostly one way, towards a mountain, so I took pains enough to go up on the mountain to see what they were getting so much honey from, and I found the mountain covered with red oak, and the leaves were covered with the bees, and with small drops that looked like molasses. When I saw what the bees were doing, I went back and took off all of the sections that were filled, and put on empty ones, to give them room to hold it. I received about 400 pounds of what I called "honey-dew." It was gathered in such a large amount that I had colonies that stored 9 pounds in one day, by the scales.

I think I have a very good market here for my honey. I sold all of it for 20 and 25 cents per pound. I have 12 colonies now, and they are all in chaff hives on the summer stands. I prepared them for winter about the middle of October, and I think they are in fine condition for winter.

A. H. CHESLEY.

Jackson, N. H., Nov. 19.

Poultry.—Any one wishing to become proficient in the handling of poultry, should send 10 cents, in stamps, to Des Moines Incubator Co., Box 78, Des Moines, Iowa, for their book of Practical Poultry-Keeping.

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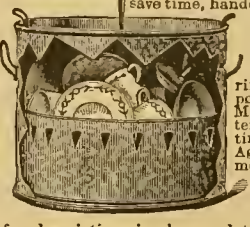

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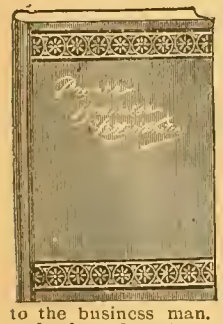

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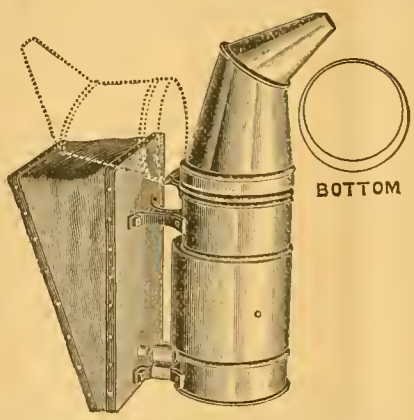

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35th Year. CHICAGO, ILL., DEC. 19, 1895. No. 51.

Contributed Articles.

On Important Apiarian Subjects.

Sweet Clover for Honey and Forage.

BY. WM. STOLLEY.

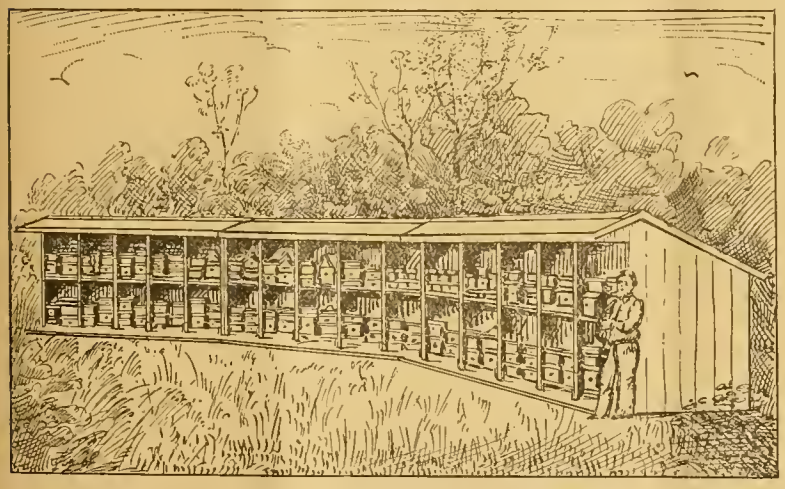
Complying with Dr. Miller's request on page 759, respecting sweet clover (melilot), I will say this:

1st. I think that about 7/10 of my 175 pounds of surplus per colony came from sweet clover, because my bees worked but a few days on alfalfa bloom, when it was cut for hay. They worked much more on sweet clover than they did on alfalfa, while they worked on alfalfa. I estimate that of the first 2,000 pounds of (nearly white) honey gathered, 9/10 came from sweet clover, and but 1/10 from alfalfa. About 1,000 pounds of fall honey, I believe, consists of ½ melilot, 3/10 buckwheat, and 1/5 wild bloom. There is plenty of golden-rod in my locality, but bees do not work on it, while four or five miles south of me (on the Platte River islands) bees work well on the same plant every fall.

2nd. I am inclined to believe that sweet clover, if allowed to grow without being cut (the second year of its growth, of course) will yield more honey than if cut; but I do not think that this is under certain conditions the proper thing to do for one who is first and foremost a farmer, and where honey-production comes in as a secondary consideration.

3rd. Again, if a farmer is also a stock-raiser, besides being a bee-keeper, he may consider the fodder to be obtained from a timely cutting of sweet clover worth much more than the number of pounds of honey he is likely to get, if he permits it to become stocky; but yielding all the honey there is to be obtained, if allowed to mature without cutting it once.

4th. Always keeping in view my locality, and taking my surroundings as a basis when answering the Doctor's questions, I will further say that I think it most profitable to cut a proper portion of the sweet clover within two miles of my little apiary, principally on the public roads, as far as a mower will do it (there is always quite a lot of it that grows too near fences and hedges that cannot be cut), just about the time when it will soon begin to bloom, so as to cause numerous and profuse sprouting anew. A proper part (about ⅓) of the growing of melilot I aim to allow to grow unmolested. The bees will boom on it soon (early in July), and by the time the most copious honey-flow from this first maturing crop is about to pass away, the part that was cut in June is taking its place. In doing this, and having but a certain number of colonies to work on a certain number of acres of melilot *at all times in bloom*, the bees will have excellent pasturage from the first of July until frost kills all vegetation.



Apiary of Mr. Wm. Stolley, Grand Island, Nebr.

Sweet Clover.

5th. My impression that sweet clover, if not cut, yields more nectar than when it is cut, is not such that I am convinced of it, but it is an open question with me yet. To this conclusion I have come by watching the working of the bees on the bloom of sweet clover; and it appeared to me that they work with more vim on the first bloom. At all events, sweet clover, on account of its deep, penetrating roots, is a much more reliable honey-yielder than white clover, not being subjected to the effects of ordinary drouths.

6th. Treating melilot exclusively as a forage plant, I will say that I have sown 15 pounds of seed to the acre, and secured a good stand. I have sown early in the fall, so as to insure good rooting of the young plants before frost; and I have sown also late in winter, so as to allow the seed to take advantage of the early spring moisture, with the same satisfactory results. Even the stubble of small grain, or a cornfield, is good enough for sweet clover without further cultivation, except a slight harrowing, and it will take care of itself in this part of the world. I have frequently scattered the seed indiscriminately on vacant places, along public roads, where noxious and worthless weeds were growing, and three years later the sweet clover had run out the weeds entirely. But let me state right here, that sweet clover growing on and alongside of public highways should be cut about June 20, so as to dwarf the growth of the plants. If this is neglected, sweet clover is likely to grow so rank and high as to make it a nuisance in winter, by causing the drifting snow to bank up, thus making the public roads impassable. Many rank weeds, however, generally growing now on public roads, are just as objectionable in this respect as sweet clover. By mowing it the middle or 20th of June (not later, if the aim is to make it profitable for the apiarist as a honey-producer), sweet clover will furnish bee-pasturage until frost kills all growing vegetation, and is not objectionable in any way to anybody if growing on the public highways; on the contrary, it is attractive, its perfume is delicious, and it keeps the roads in good condition. In a mild and late autumn I have seen melilot thus treated blooming in December, and bees at work on it here in Nebraska.

7th. Sweet clover is much more succulent, and requires considerably more curing than alfalfa. During the first year it should be cut the latter part of June, when it is from 18 to 24 inches high; again the middle or latter part of August, and then it will make a fine subsequent growth, so as to make excellent pasture for stock clear into winter, and not be injured.

The second year it should be cut but once, in June, or not at all, as circumstances may make it advisable. This is my experience here with sweet clover. What it may do, or not do, in other parts of our great country, I will not pretend to say.

Each cutting will give from two to three tons of hay per acre, according to productiveness of soil. If it is not desirable to let it go to seed the second year of its growth, melilot should be plowed up about the beginning of July; a crop of buckwheat may then be grown on the same land to maturity, and winter grain may be sown following the harvesting of the buckwheat the same year.

If melilot is suffered to grow undisturbed the second year to maturity, it makes a tremendous growth on good land, and this is what scares some farmers. They do not know what to do with it, when it stands in a solid mass 5 to 7 feet high, brush-like, and nearly as hard to cut as wood. It takes a good three-horse team and a No. 1 sulky-plow to put the whole mass of vegetable matter underground and out of sight. But the land itself will be enriched by it. Poor land will gain rapidly in fertility by being worked in this way. The strong and deep penetrating roots of melilot open up the subsoil of the land, by making innumerable channels which permit the mineral salts and moisture deposits below to rise to the surface when needed for plant food, after the roots have decayed, which takes place in a very short time.

Knowing the nature of this plant, any sensible person will be able to cope with it, and make this excellent plant a source of profit; but "a natural fool" is apt to have a job on hand that will make him "sweat," and he ought to, for that is what he was created for.

As I stated in my article on page 728, melilot requires considerably more curing than alfalfa, and after being sufficiently cured it should be stacked early in the forenoon or towards evening, so as to prevent the leaves from dropping off. Also a liberal sprinkle of salt should be thrown on every layer of it. This will help greatly to prevent heating in the stack, and will permit its being secured and stacked much sooner than if not so treated.

It is probably in order that I also state that land on which melilot once matured and ripened its seed, is for a number of years stocked with it; for how many years I am unable to say. Not knowing the nature of this plant, I sowed its seeds all around about my premises—lawn, apiary, and everywhere else, and some of my neighbors predicted later on that the blamed stuff would run me off of my farm, since it was getting ahead of everything growing. "Yes," one of them said, "this million clover (he could not remember 'melilot') is already on its march to town, and grows in the court-house yard, and will eventually drive away the court house 'rats' (county officers)."

Well, years have passed since this storm of indignation against sweet clover and myself was raging, but my apiary, lawn, and the park is in as fine a condition as it ever was, and our "court-house rats" are infesting the old court-house yet.

If melilot is to be eradicated, it should be allowed to bloom, but before ripening any seed, it should be cut near the ground, and that will kill the plant in all its parts, or "root and branch," as the saying goes.

I hope that the foregoing will about satisfy Dr. Miller, and probably some others who, after reading my former article on sweet clover, addressed me by letter and postal card, making inquiries about it. I have answered some of them by letter, *i. e.*, those who enclosed a postage stamp or stamped envelope, but those who neglected doing this will please excuse me when I refer them to the above for information, as an answer to their letters of inquiry.

All that I have to add is, that I have no melilot or sweet clover seed for sale. Those who have, should make it known by advertising in the American Bee Journal.

Grand Island, Nebr.

[Thank you, Mr. Stolley. I think Dr. Miller will now be satisfied. Surely, you have told us a good deal about sweet clover—that queen of honey-plants. It might be well if those who read the Bee Journal would get their local newspapers to copy Mr. Stolley's interesting and instructive article. By all means urge the publishers of your farm papers to publish it. It is just the kind of information that farmers, as well as bee-keepers, need to have.—EDITOR.]

Wintering—Size of Bees.

BY J. H. ANDRE.

Some twelve years ago, when examining an apiary in the spring, that belonged partly to myself, I found the bees in some chaff hives all dead, with plenty of honey in the hives in good condition. Bees in the old-style box-hives close by had wintered first-class. After much study over the matter, I came to the conclusion that an hour of sunshine after a week or ten days of severe cold weather would warm a single-walled hive sufficient to arouse the bees and enable them to partake of food, which would put them in condition for another cold spell. The severe cold spell penetrated the double-walled hive, and the warmth that was sufficient for the single-wall had no effect on the double-walled hive. This would produce the result of *sure starvation*.

In view of this, I wish to ask Mr. Morton, if his house-apiary (mentioned on page 847) is not more objectionable than a chaff hive. It seems to me the temperature will fall far below the safe wintering point, and warmth will be lacking to enable the bees to take food. Artificial heat quickly applied to the room when it was warm enough for a flight outside might work well, but it is doubtful if it could be regulated to work at other times, on account of the bees crawling out at the entrance and perishing.

Dr. Miller, (on page 726) speaks of "any two bees," taken from his hives. Beg pardon, but Dr. M. will find a great difference between a mass of bees on a small piece of comb and "*two bees*." I do not wish to make too rash an assertion, for it might bother me a trifle to tell which colony bees belonged to in an apiary of 100 colonies or more, but when I kept 20 colonies (I never was as big a bee-keeper as Dr. M.) it was not at all difficult for me to tell what colony a bee belonged to, if the queen was old enough for me to get a knowledge of her progeny.

In regard to two colonies working on a small piece of comb (now please bear in mind I do not mean in the apiary, but *half a mile or more away*)—if Dr. Miller had experienced the vexation of losing many a tree by tame bees working in and running out the wild ones, he would have a different opinion. My first thought on reading his exceptions was to have the matter referred to the Query-Box, but a part of it comes

under the knowledge of bee-hunting instead of bee-keeping, and possibly some would not understand the former. Probably this is not the last that will be heard of the matter, as no doubt the experts will be giving particular attention to size, shape, markings, etc., if the weather will permit. Dr. Miller will be given all the praise of having furnished food for thought, for the claim is not mine. Lockwood, N. Y.

Amalgamation of the "North American" and the "Union."

BY GEO. W. BRODBECK.

I have restrained my promptings on this subject, awaiting the report of the committee so as to be more capable of intelligently digesting the project presented. The committee selected by the North American Bee-Keepers' Association was appointed Sept. 6, and the report of said committee came to hand Dec. 4, with the suggestion—"If the consolidation is effected it would be desirable for it to go into effect Jan. 1, 1896." The subject of consolidation has been in the hands of the Committee now for almost three months, and in the meantime the bee-periodicals have seemingly combined to strain every nerve in support of this project of amalgamation, and thus, taking all this into consideration, it would be but right and just to extend the time for an intelligent discussion of this subject by the members of the National Bee-Keepers' Union, until March 1, 1896. The members of the North American Bee-Keepers' Association in a body, and as individuals, have been given time for full and free discussion, and as a member of the Union I demand a just and equitable indulgence.

I have no thought or intention to cast any reflection on the Committee, in their endeavor to thus force the members of the Union to a hasty conclusion. I have the highest esteem for each and every member on this Committee, and three of the number I know in person, and I say, without fear of contradiction, that a better selection could not have been made; but we are all human, consequently all of us are likely to err, so in their zeal to hasten this consummation, in all probability they have not taken the scattered membership of the Union into consideration as fully as they might have done, so we trust in the ready assent of a longer delay, when all will result in "seeing fair play." [The Committee have already revised their Report to read thus: "If the consolidation is effected, it would be desirable for it to go into effect *as soon as possible*."—EDITOR.]

The subject of amalgamation is of far greater import to the members of the Bee-Keepers' Union than to the members of the North American. The Union has a record that no other like organization can point to with such just pride, and its membership to-day stands with an unbroken front from Maine to California; but let us remember that we have not reached our present stage in a day, month or year, but that it has taken ten long years, and those years to some have been years of unceasing toil and care, and the brunt of all this fell upon that indefatigable worker and staunch friend of American bee-keepers—Thomas G. Newman; and to him, more than to any one else, is due the success of the National Bee-Keepers' Union.

On the other hand, we have the North American Bee-Keepers' Association, and as a social organization it also can take just pride in its record of members, comprising some of the brightest lights of modern bee-keeping, and who have written their names upon the hearts of every intelligent bee-keeper on this continent, and thoughts of whom will always be thoughts of pleasure. I indeed feel sad to think of the possibility of its speedy dissolution, but as it comes to us as an admitted failure, is it advisable for us to take unto ourselves such a "helpmate," and in doing so surrender our birthright and enter into a new field of speculation and adventure? An old adage just here presents itself, and I advise every member of the Union to "be sure you're right then go ahead;" but unless you are, "let well enough alone."

The Committee claim two organizations to accomplish the work is not necessary—and right here we agree; but they forget to state that the work of the two organizations are entirely different, and thus requiring two separate and distinct associations. The Union is purely a business organization, and its sole object is protection, and no one can say that it has not fulfilled its mission. On the other hand, the North American is a social organization, and to tack on social features to a business organization will result in failure to both, for past experience has proved that you cannot combine business with pleasure.

I firmly believe in the need of two separate organizations, and I am willing to pledge my earnest support to both; and while I never had the pleasure of attending but one session of the North American, yet if provision had been made by change of Constitution and By-Laws, I would have willingly sent in my yearly dues, the same as I have in years past in connection with the Union.

If the Union enlarges its field by extending a protecting arm over Canada, our present court decisions in this country would be of no avail there; and like decisions there would be of no use here. Then if we unite on a protective basis, protection must be equal and just to all, and if our laws come in conflict with our organization in either country, to place us on an equality, it will be necessary for us to use our influence to do away with these laws; and if we are so fortunate as to induce our Government to aid us by an appropriation, it would be right and just to utilize the funds in the interest of our Canadian brethren as well as on this side; then, to be brotherly, we would expect our neighbors to exert like influence with their Government, so I but naturally ask the question, Is this all feasible?

The Constitution presented on page 757, does not designate any place of business, consequently it is optional with the Board of Directors whether it is in Canada or the United States. The present place of business of the Union is Chicago, and almost any one knows where that is; but the proposed new place is a myth.

I now come to one part that is extremely exhilarating, and that is—all disposal of funds is within the hands of the Directors (officers), and can be used for any purpose in connection with bee-culture; so if this project is a success, I want the members to elect Prof. Cook, "Rambler," or myself, one of the Directors, to secure funds in the establishment of our prospective California Honey Exchange; for you see this is in connection with bee-keeping, and would be far more profitable than an investment in prize essays, and in payment of possible junketing expeditions, all of which is possible, for the duties of the Directors only require their own indorsement; and then, if the funds run low, all that is required to replenish the exchequer is to assess each member for the amount necessary (note this); and, of course, to retain membership in this organization compliance to this would be necessary.

Now, Mr. Editor, to close, I desire to say that I have written this with all candor, and malice towards none; and, if, after careful consideration, the members of the Union positively decide on accepting the propositions presented by the Committee, I am with the majority; but for the present I am for the perpetuation of the National Bee-Keepers' Union.

Los Angeles, Calif., Dec. 4.

Sweet Clover—T Supers and Pattern Slats.

BY PETER J. SCHARTZ.

For a continuous honey-flow I would prefer sweet clover to all other honey-plants. The honey cannot be excelled by any other, no matter from what source it is taken.

Sweet clover comes in bloom about the first part of June here, and blooms till killed by frost. It grows on any soil, among stone-piles, along roadsides and other waste places. If bee-keepers would sow it, their bees would not have to be fed. Just think of taking 100 to 150 pounds of sweet clover honey per colony in dry seasons, and if not too wet securing still more! It is self-seeding, and only needs sowing once, when it is good for all time. For feed it is not very good unless cut very early, and then it would not be of any benefit to the bee-keeper.

If all bee-keepers would contract for a piece of land, say four or five acres, and sow it with sweet clover close to the apiary, it would be a good investment.

To secure fall honey from it, cut half of it down about the middle of August, and one week later cut the rest of it down, and that will give you pasture till killed by frost. By cutting it down, the second crop will bloom for the balance of the season.

T SUPERS AND PATTERN SLATS.

I want to say something in regard to the T super. I think that Dr. Miller is right in using it, for several reasons which I will give from experience.

I have used the dove-tailed hive one season, with the section slats and flat hive-cover. There is a ¼-inch bee-space above the brood-frames, and the slats are flush with the bottom of the super. I put the super on the hive with the sections and slats fastened up tight. Two weeks after, I took off the cover and cloth to see how the bees were getting along. I found the slats and sections had slipped down on the brood-frames, and all glued fast by the bees, with wax and propolis.

But didn't I make a mess of it when I took off the sections and super! it looked as if you knocked a man's hat over his eyes and ears—only a little sweeter. I decided I would not use those frames again that way.

Then I tried them again by making the brood-frames flush with the top of the hive, and nailing a ¼-inch strip on the inside, flush with the bottom of the super, letting the slats rest on them, and still giving a ¼-inch bee-space; but I have discarded that also, for the reason that the bees have it all glued together, which makes it difficult to remove the sections and slats.

But I now use the T super because it is easier to put in and remove the sections, and not so many traps. The way I make the T super is this:

I drive in the staples for the T tins to rest on, except the outside ones, which I nail fast to the two end-pieces by leaving half of the T tins lap over on the bottom of the super. On the one side I drive three 6-penny wire nails; on the other side I take two one-inch screws for each end, and fasten it together, put in the sections, put three T tins between the sections on top, and they will not be any more diamond shape than in the slats. When full, I take it off the hive, take out the four screws and T tins from the top, spread the ends a little, when, presto! there you are; your sections are all out in a jiffy.

Some other time I will also give the reasons why I discarded the flat hive-cover, and how I make my own.

Lemont, Ill.

Marketing the Honey Crop.

BY W. D. FRENCH.

Bee-keepers of California are waking up to their sense of duty, in the matter of marketing their honey. Nearly every person is becoming convinced that something must be done, in order that their cherished pursuit may not fall beneath the feet of those who have sought its eternal ruin.

The marketing of honey, to me, seems easily adjusted. The point which we desire to make, is, that our product be delivered direct to the retailer by the operation of a direct transaction. It is a conceded fact, that the production and distribution of our honey has never succeeded in its equilibrium. To illustrate: There are several carloads of honey shipped from Salt Lake City to Chicago, when at the the same time it should have gone to Helena, Montana. Many carloads that are shipped from various other points to Chicago, should have gone to points in Idaho; train loads from California to Chicago, that should have gone to the Dakotas, or some other place; and so on.

Therefore, it will readily be seen that many of our good points for marketing our product have been utterly ignored, while some other place has been over stocked.

The over-stocking of one principal point, like Chicago, or New York, has its demoralizing effect upon all other markets. Therefore it will be plainly seen that to have an organized system of distribution, prompted by a General Manager, who should be located in Chicago, would secure for the producers a quick and better price for their product. It cannot be doubted that it will also render the same profit to our Eastern brothers, as to those who are located in California.

As I have before urged, I feel confident that it would be best to enlarge upon the premises of the Bee-Keeper's Union, and through its instrumentality adjust all of this disturbance, which is so vital to our interests as bee-keepers, throughout the United States, and restore our product to its equilibrium, as does the blood from the heart of a human being.

I am now informed that the price of honey in San Diego has declined, and they are paying 2½ cents per pound in 60 pound cans, cased. The reason of the recent decline, as stated, was because a certain apiarist had started for town with his load.

An ever watchful eye
Is kept by those who buy:
So when a "soup" is sighted,
They all are much delighted—
Because they're "in the swim."

Foster, Calif.

Non-Swarming Bees vs. Non-Sitting Hens.

BY BERT LOWNES.

Mr. Norton (see page 663) believes that since man has eradicated the sitting instinct in several of the different breeds of fowls, and has produced practically seedless fruits of a few varieties, that the swarming habit in bees may in time be bred out, or at least lessened to a very great degree. I will admit that we have some seedless fruits, and a few so-called non-sitting breeds of fowls—non-sitting in fact, although, as I shall explain, the desire to sit has not been bred out.

In regard to fruits, and in fact all plants, I will say that they are more under man's control than bees or other animals. They have no *will* to be subdued, hence, can be more easily managed.

Place a plant in a can of earth, and as long as the conditions are favorable enough to sustain life, even though other soil, climate, surroundings, etc., would better meet its requirements, it will remain there.

We may put a swarm of bees into a hive, but unless it meets with the approval of the bees, we are not so sure of their remaining. It is not instinct or nature that makes this difference, but *brain* which a bee has and plants have not. Man may remove the necessity of seeding in certain fruits, and the fruits may in time become seedless, but it does not follow (necessarily) that by removing the necessity of swarming in bees, they will have no desire to swarm, or, I may say, hens have no desire to sit, because artificial incubation removes the necessity of their doing so.

As I said before, plants have no will—they do not *care* whether their species are duplicated or not, hence by removing the necessity one *may*, or may not, remove the seeding of certain varieties of fruits, etc.

With bees and animals it is different. Bees do not swarm, or hens sit, for the good of their posterity, at least they do not have the well-fare of their future generations at heart, but they reproduce their kind for the *love* of it. Hence, a person may remove the necessity of swarming in bees, and sitting in hens, and still not succeed in breeding out the desire of the one to swarm or the other to sit.

Man does not get to himself a family for (the) fear that the earth would become depopulated if he remained single.

I have heard from good authority that fruits of different species may be grafted together with good results; then why cannot we make a cross of the honey-bee on the bumble-bee? It is because man cannot control animal life to the extent that he can plant life.

Then comes the non-sitting hens. I will admit that the Leghorns, Houdans, Hamburgs, and a few other breeds are non-sitting breeds, and have become so by domestication; but surely Mr. Norton does not mean to say that artificial incubation has, by removing the responsibility from the hens, made them so! If it has, why hasn't it made all breeds non-sitting? For that to be true, it would be necessary for the hen to be able to exercise reason; then we might expect a hen to exclaim (in her own language, of course), on seeing her owner "set" the incubator: "Well, sisters, there's John setting the incubator; we needn't bother about rearing a brood this season, for there will be plenty without."

Further more, if Mr. Norton should go to the jungle and get, we will say, two dozen Leghorns, and on returning should present me (?) with half of them, and under our care they should become domesticated, and Mr. N. should use an incubator, thereby removing the necessity of his hens to sit, and I should leave the responsibility of reproduction on my hens, in order to substantiate Mr. Norton's statement his hens should become non-sitting, while mine should remain as they were in the jungle. The fact is, though, that both lots of chickens would become non-sitting.

Artificial incubation has not removed the desire of any hen to sit, or made any hen a non-sitter. All the non-sitting breeds were in existence (not *all*, either, but enough to make the logic of this statement good) before artificial incubation came into general use.

Look at all the different breeds of non-sitting fowls, and see if they do not all have a wild, timid nature. Man can hardly approach them—a 12-foot fence cannot imprison them. This, and this only, has made them non-sitting breeds.

Domesticate a Leghorn, and in due time she will become broody, but as soon as the chicken-house door is opened, she is off the nest; and after this is repeated a few times she gives up the notion for the time being.

Ask any poultry fancier who rears non-sitting breeds, and see if he does not tell you that quite often one of his Leghorns or Hamburghs, as the case may be, becomes broody, but is *scared* out of the notion. When Leghorns are kept on a farm where they have an unlimited range, it is not infrequently that a hen will "steal her nest," and if left unmolested, will, in due time, appear with a brood of chicks, and I believe that if a flock of Leghorns, or any other non-sitting breed, were left to themselves, and not molested, the entire flock would sooner or later take to "rearing their own chickens."

These are absolute facts, and go to prove that the desire

to sit has not been bred out of the non-sitting breeds. You may scare a hen out of the notion (not breed out the desire) of sitting, but I do not think the bees will be frightened out of the "swarming habit."

I believe with Mr. Norton, that to breed any trait or tendency into a race there must be more or less of it there to begin with. As to breeding a non-swarming tendency into the bees, I think there is *less* of it in the bees than would be necessary to have in order to make it possible.

Mr. Norton, no doubt, believes that a selection of the queens whose bees are not so inclined to swarm, would, in the course of time, produce a non-swarming bee. And why shouldn't that be the case? Isn't that logical? For an example, take a Plymouth Rock hen. A hen of this breed will do well on less feed than either the non-sitting or the Asiatic breeds. Now, by careful selection couldn't a person produce a strain of chickens that would get fat on nothing?

Some people have large ears and some have very small ones; would it be possible to breed our ears off entirely? We can drive Nature so far, but no farther.

Charter Oak, Iowa.

What Dr. Miller Thinks.

Bee-Keepers' Association.—Hon. George E. Hilton is surely an enthusiast in the matter of bee-conventions, as shown on page 774. If he should be taken at his word, and go to help organize an association in every township within one or two hundred miles, he would have to hire an assistant, for there wouldn't be enough days in the year for him to do the work alone. He is probably safe enough, however, in making the offer. Many who keep bees have never attended a convention of bee-keepers, and they don't know how much they are missing.

Keeping-Qualities of Honey.—What Mr. Abbott says on page 776 sets one to thinking. Why is it that in one case honey keeps all right 300 years, and again it spoils in less than that number of days? As he suggests, much may be in the treatment. Isn't there something also in the honey itself, independent of the treatment? More or less pollen is found floating in honey. If there is much pollen present, a rumpus might be expected on slight provocation. Might there not be such a thing as honey practically free from pollen? and would not such honey resist fermentation even under trying circumstances? I'm with the writer, in preferring honey that has never shown any inclination to ferment. And yet I've had honey that had become fairly entitled to the designation "soured," that became so changed as to become really good honey. It was simply allowed to stand on the reservoir of a cook-stove for a long time, perhaps two or three weeks. As a rule, when honey is heated it is pretty nearly ruined for table use. The heating should be very gentle and long-continued.

Apiarian Nomenclature.—Referring to the editorial on page 780, "bar" is a good deal shorter than "perforated metal" or "queen-excluder." The latter is the common name, and is open to the objection that it does not always express the truth, for perforated metal is often used as an *includer*. "Bar" would be appropriate in either case, for the perforated metal *bars* the passage of the queen. But an objection to "bar" is that it is also used so much in naming top-bars, end-bars, bar-hives, etc. "Hive-floor" isn't much shorter than bottom-board, but why say hive-floor any more than church-floor or house-floor? "Floor" is enough. "Cellar" is a word that I think we have a right to use as a verb. Instead of, "I put my bees in the cellar," say, "I cellar my bees."

The Strawberry-Growers Versus Abbott and Jolley.—At the December meeting of the Northern Illinois Horticultural Society, the question was asked, "Suppose I plant a bed of Crescents with no staminate varieties within 40 rods, how much of a crop will I secure in a series of years?" All were asked to arise to their feet who believed a half a crop could be obtained, but not a man arose. The same result was obtained when a quarter of a crop was named. An eighth of a crop was named, but not a man believed that could be obtained. Then all were asked to arise who believed less than an eighth of a crop would be got. Promptly they arose as one man. Secretary Hartwell, himself a specialist in strawberry culture, remarked that to say that a crop of berries could be obtained from a bed of Crescents, was one of those half-truths that were mischievous in their tendency, and were sometimes used by those who had a smattering of theoretical without practical knowledge. Especially the Crescent among those classed as pistillates might sometimes produce quite a quantity of fruit without other varieties near, there being sufficient stamens present for that result, but that would warrant no intelligent, practical fruit-grower in saying he could raise crops of Crescent strawberries without the aid of staminate varieties.

Those Questions.—In answer to question No. 1, on page 780, I think I'd like to have more of the advertising department. Not that I like to read advertisements so much better than other things, although I generally keep track of what is being advertised. But the more paying advertisements, the better the publishers can afford to make improvements, and if advertisements crowd too hard on the reading pages, more pages could be added.

M. H. Martin's Yield.—What's the matter with those figures on page 783? I don't call 1,400 pounds a "good yield" for 70 colonies. Don't you mean 14,000?—[Yes; that's a case where a cipher means something. 14,000 is correct.—Editor.]

Strawberry Pollination Once More.

BY REV. M. MAHIN.

A good deal has been said in the American Bee Journal of late about strawberries, and the question is left in what seems to me to be an unsatisfactory and misleading condition. It has been asserted—and the assertion uncontradicted—that a crop of berries can be raised from plants producing no stamens without there being any plants in the vicinity that produce pollen. Now I feel very sure that this is a mistake. It is possible that some of the pistillate varieties have, here and there, inconpicuous stamens that yield enough pollen to produce a crop of berries, but it is not true of all of them.

A man, living across the street from my home, told me last summer his experience with strawberries. He said he sent away and got plants of one of the highly-recommended varieties; that he cultivated them well; and that they grew luxuriantly and bloomed profusely; but that they did not produce a strawberry. He kept them two or three years, and as he got no fruit he dug up the plants and put something else in their place. He had only the one variety. A friend of mine in the country had a similar experience. His one variety produced no fruit at all. So if any of the readers of the American Bee Journal plant pistillate varieties alone, they will, almost certainly, have their labor for their pains.

Our "Jolley" correspondent says that pistillate varieties produce some runners that have perfect blossoms, and *vice versa*. So, at least, I understand him. Now, I believe that is a mistake. It is contrary to the rule of Nature in the vegetable world, and in order to its acceptance it requires to be established by very positive and abundant proof. As it is one of the easiest things in the world to be mistaken, every step in the process needs to be closely scrutinized. We might have a plant known to be pistillate. It must be planted by itself so far from any other plants that the runners cannot intermingle. Then if staminate plants are produced, the contention of Mr. Jolley is sustained; otherwise not. I am open to conviction in regard to this matter, and to all others; but the evidence must be conclusive, which, as yet, it is not. New Castle, Ind.

[See Dr. Miller's comment on this subject, on this very page.—Editor.]

Liberal Book Premiums are offered on page 814, for the work of getting new subscribers to the Bee Journal. It is a fine chance to get a complete apicultural library. Think of it—40 cents' worth of books given to the one sending a new subscriber! Remember, please, that *only* present subscribers to the Bee Journal can take advantage of that offer. The publishers of the Bee Journal believe in making it an object for the old subscribers to push for new readers among their neighbors and friends, hence the generous premium offers to them. It is hoped that all may begin *now* to work. Sample copies of the Bee Journal free.

Now is the Time to work for new subscribers. Why not take advantage of the offers made on page 814?

Notes and Comments.

CONDUCTED BY

Rev. Emerson T. Abbott, St. Joseph, Mo.

Ducks and Bees.—"White clover sod does not make a good pasture for ducklings, and consequently the three get badly mixed up. The bee stings as she goes down the duckling's throat on a clover head, and the career of the bee and duckling both come to a sudden termination."—Biggle Poultry Book.

It seems strange that men of more than ordinary intelligence will continue to write such squibs. I am sure that the yearly average would not be one duck in a thousand, which would be killed in the way suggested above, if the clover patch was full of ducks and bees at the same time. It seems to me like making "much ado about nothing," to write such a paragraph. It can do the duck-raiser no good, and may create a useless and unjust prejudice against the bees. The duck-raiser, I think, need not bother his head about the quantity of ducks he will lose in this way, and surely the apiary will not be depopulated by the bees being consumed by the ducklings!

The House Beautiful.—This is the title of a little booklet published by James H. West, Boston, Mass., which is such a perfect gem that I feel I will do the readers of the Bee Journal a lasting benefit by calling attention to it. It costs only 15 cents, and is worth its weight in gold to every home-builder who will read it and heed its suggestions. It can be read through in an hour, but there is meat enough in it to make a book of a thousand pages. Every young married couple should have a copy and read it through once a day until all its wholesome and inspiring suggestions have become as familiar as the furniture of the home.

This is not an advertisement, nor an ordinary review, as I paid the cash for the copy I read, and have to-day mailed it to a friend; for I felt, as soon as I read it, that I wished that everybody I knew had a copy. Send and get one, and see if you do not feel the same way. Mention the Bee Journal.—[Yes, I, too, have read this booklet, and it is superfine.—Ed.]

Notes from Virgil.—Some years ago there came into my hands a copy of a translation, with notes, of Virgil's works, made in 1653, by one John Ogilby. His notes on the Fourth Georgic cannot fail to be of interest to bee-keepers, as showing what was known about this industry over 200 years ago. I give the notes as they appear, spelling and all, with some few remarks.

The annotation on the Argument is suggestive. It reads as follows:

"The fourth Book comprehends the choicest rules of the ancients concerning Bees, which suit so well with ours that I have heard an honorable Lady of Great Judgement (the late Countess of Kent) profess that she made an incredible increase of Bees, confining her servants who attended them precisely to observance of this Book."

On the line,

"Next to Aetherial Honey I'll proceed."

the translator remarks:

"The poet (saith LaCerda) excellent in Natural Philosophy, subverts the common opinion implying that the bees do not make Honey, but only gather it together and compact it, and therefore calls it Aerial and Celestial. To this assents Aristotle. That Bees make not Honey but carry only away the falling Dew, may be argued from hence, that in one or two days a Hive may be found full; Besides, if you take away their Honey in Autumn, they cannot recruit it, notwithstanding there are flowers at that time of year. And Pliny, 'Whether it be the Sweat of Heaven, or Spittle of the Stars, or Moisture of the Air purging itself, I wish it were as pure and natural as it first descends; Whereas now falling from so great height, it contracts much of impurity by the way, yet retains much of the pleasantness of its Celestial nature.'"

This was before the days of glucose. Pliny seems to have had some idea of the adulteration craze, even in his time; but he does not tell us whether he thought it done by men or the gods.

(To be continued.)

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Moving Bees—Peculiar Sweet Clover Honey.

1. I can buy cheap, 8 colonies of bees that stand about half a mile from my apiary. If I should move them now (Nov. 28) to my cellar, and leave them there until they can be given a good cleansing flight—say in February or March—will they stay at their new place, or will they fly back to their old stand?

2. September 14 I extracted five large pots of well capped (sweet clover) honey. All of this honey has as nice a flavor and taste as you can wish sweet clover honey to have. But, strange to me, the honey in three of these pots will foam every time it is stirred or poured into another vessel, and after it has been left alone for about 10 to 12 hours, it has settled again, is clear as before, and has lost nothing of its fine flavor or taste. What is the matter with that honey?

SUCKER.

Answers.—1. I think they'd stay all right. But everything is frozen up as I write this, and there is some danger in hauling them a half mile now and putting them immediately in the cellar. Whether put into the cellar or left out, I should want them to have a flight pretty soon after being hauled. If you haul them home now and set them out-doors, and they have a flight within a week or so, and are then put into the cellar, they would be all right; but if there's no flight from now till spring, I'm afraid they'd be all wrong. I don't think there would be much trouble about their going back now, even if they should fly right away after being moved, especially if no colonies at all are left in their old home. It's a different thing now, with everything frozen up, from what it would be with flowers yielding, and their flying far away every day.

2. The only thing I can think of is that pollen in the honey causes fermentation, but usually the honey is not quite so nice after this fermentation. I wish you would tell us all you can about this sweet clover. How do you know the honey is all from sweet clover? How much did you get per colony? When was it mainly gathered? How late in the fall did the bees work on it? Was the sweet clover allowed to grow unmolested, or was it cut down or pastured by stock? If cut, when? Please tell us all about it.

Honey-Barrels Painted Inside—Two-Story Hives for Wintering.

1. Will a barrel painted on the inside to prevent leaking injure the flavor of extracted honey?

2. Also, what do you think of wintering bees in 2-story 8-frame hives? I have all of my bees (I have only 10 colonies) in 2-story hives, with the upper story full of honey, with the cover sealed down tight, and on the summer stands. Do you think there is too much space to keep warm? Or, as bees work upward in cold weather in the center of the hive, they will be right under the sealed honey of the upper story, which I think would be just the thing.

3. Will the bees be safe in the space between the bottom and top bars of the hives on passing from the lower story to the top story, which I think is a cool place on account of the tendency of a draft of cold air which would prevent them going up?

H. E. L.

East St. Louis, Ill.

Answers.—1. I shouldn't want to risk any kind of paint on the inside of the barrel. If the object of the paint is to prevent leakage, you can do better with paraffin. I think some one told about that lately, but I'll repeat: Have your barrel headed up and thoroughly dry. Hoops driven up tight. Now pour into the bunghole 5 or 10 pounds of paraffin well heated, and drive in the bung. Move lively now and roll the barrel over and turn on each end so that all parts are waxed, then quickly knock out the bung and empty the paraffin. Look out that the bung don't hit you when it comes out, for the heated air makes it come as if shot out of a gun.

2. No, I don't think there's too much room to keep warm. As long as the empty space is at the bottom and not at the side, they can climb up where it is warmer. I think you might have made it a little warmer by adding a third story above

and filling it with planer shavings or some kind of packing. As your covers are sealed down, perhaps you better let them alone now, but there's no harm in your putting some kind of packing on top of the sealed covers, with a rain-proof cover over all. Packing at the sides might be an improvement, but in the latitude of St. Louis it may not be needed.

3. If you gave one of the stories just before winter, and if there was a big space—say an inch or more—between the two stories, there might be trouble. But if the bees had the two stories throughout the summer, or at least before the harvest was over, I think you need not have the least uneasiness. If there was a space of only ¼ inch, that would be readily crossed by the bees; and if the space was greater, the bees would build burr-combs for ladders.

I am very much interested in knowing about those 2-story hives. I wish you would tell us about them. When were the second stories given, or were they on all the season? How strong were the colonies in the spring? How were they in the fall? What was the crop? Can you tell us how they compared with one-story colonies? Were they run for comb or extracted honey?

Stopping the Sale of Sugar-Honey.

What method would you take to stop the selling of sugar-honey? There are agents coming here and killing our market. We get in the home market, 25 cents per pound for honey, and the agent sells sugar syrup at 6 pounds for $1.00. Can't we stop him in some way? E. C. C.
Tarentum, Pa.

ANSWER.—Something depends on the laws you have in the good old Keystone State. If sugar syrup is sold under the name of "honey," and the law provides a penalty for selling an article of food under a wrong name, then you can prosecute under that law. If it is sold under the name of "sugar syrup," then no law can touch the case, and there is really nothing wrong in it. If it is a case of real fraud, the Bee-Keepers' Union might afford some help, providing you are a member thereof. Every bee-keeper ought to be a member of that organization, for the sake of his own safety, and for the benefit of others.

Keeping Partly-Filled Brood-Frames in Winter.

I have some partly-filled brood-frames that I wish to give to my bees next spring. If I keep them where they will freeze, will it do any harm? or would I better keep them where it is warm? J. A. E.
St. George, Maine.

ANSWER.—The honey will keep better if the combs are in a warm, dry place. But if they are not to be given to the bees pretty early in the season, there will be an advantage in letting the combs freeze, for that will kill any worms that may be in them. On the whole, I believe I wouldn't go to any very great inconvenience to keep them from freezing.

Water Running Out of Hives.

I am wintering part of my bees out of the cellar in a long, low shed, packed on three sides with chaff, with perhaps four inches of chaff on top. They are sweating badly now, so that water runs out of every hive. Last winter I had them in the same place, and lost several colonies from the same cause. The combs got moldy and wet along in February. But the hives show a great deal more of water running out of them this early in the winter than during all of last winter. Last winter I had about eight inches of chaff on top, so I thought perhaps I had too much, and only put on four inches this winter. I put on the hives coverings of very porous material this fall, hoping that would remedy the matter. But it does not, unless I put the coverings on too soon, and the bees had a chance to varnish them over, making them water, or rather vapor, proof. I am afraid I shall lose a good many colonies in the shape they are in now.

The colonies that are in the cellar show no signs of dampness whatever. What is your opinion in the matter? and what would you advise doing? Take the packing off entirely? The covers are raised up ½ inch, so as to give free circulation.
Fremont, Ohio, Dec. 6. C. R.

ANSWER.—Did you ever stop to think why the bees "sweat?" Did you ever see them sweat on a hot day? I doubt if you did. And if you take off some more of the top packing you may see them sweat worse than ever. The bees exhale vapor, and when this vapor strikes the cold walls of the hive it sometimes congeals into frost there, melting into water and running out of the hive as soon as the weather is warm enough. Sometimes it merely condenses into water and runs out of the hive as soon as enough is collected. Whether cold or warm, this vapor is being sent off at all times, only when it is warm enough it does not condense into water or ice.

Evidently the cure is hardly making the hive colder. If you double the covering on top it may help instead of hurt. Possibly the entrance is not open enough. For with the entrance sufficiently open, the vapor could pass out without settling on the walls. If everything else is right, you needn't be alarmed by a little water running out of the hive. That's a common thing to be seen at the entrance of a strong colony the morning after a cool night every spring.

Canadian Beedom.

The North American—"Opinions Differ."

On page 684, Editor York says: "I cannot understand how any one can feel satisfied to attend a convention of the North American and not contribute toward paying its expenses."

Yes, Bro. York, "opinions differ." I think I enjoyed the convention about as heartily as any one present, but, I didn't pay my dollar to become a member. Why? Because I gave my dollar to Father Langstroth, in preference to becoming a member of the North American, and I thought that was about all I could stand after a poor honey crop.

More than that, what inducements have you to offer for me to become a member? Do you suppose I am going to buy a 2:40 horse, and let some other fellow ride? Oh, no! my wallet is not deep enough for that kind of business. What do I mean? I mean just this:

The North American Convention is held once a year, and about once or twice in my life-time, (if I live long enough) will the place of meeting be within my reach. Now, do you suppose I am going to contribute out of my scant income to defray the expenses of the Association, and let some other fellows enjoy the fun and pleasure of attending the conventions? No, no! Bro. York. I am not built that way.

Now, I will tell you when I will become a member, and forward my dollar cheerfully: Marry the two organizations, so that being a member will be a benefit and protection to me, no matter whether I may have the opportunity of attending conventions or not. As soon as such union is accomplished, then, and not before, have you any just right to claim our support.

I will offer a suggestion, in reference to making the North American more remunerative to its supporters: Could not some of our leading apicultural lights devise some feasible scheme by which some kind of accident insurance on bees and apicultural appliances could be introduced? and arrange it in such a way that members—and members only—could avail themselves of the protection of the Association against loss from fire, tornadoes, cyclones—and Mexican bull fights—which may come our way and destroy and injure our apiaries?

Now, while I would not attempt to formulate a plan by which such an object could be introduced, laying all jokes aside, I *do* believe that some one with the ability to evolve and impress such an object upon the minds of the now able members of the Association, would perhaps work some good. Take the suggestion for what it is worth, and consider where it comes from.

But remember, Bro. York, that you may live in a glass house yourself some day, and then you may expect to see a shower of Canadian pebbles with a streamer of membership fees attached! D. W. HEISE.
Bethesda, Ont.

The Alsike Clover Leaflet consists of 2 pages, with illustrations, showing the value of Alsike clover, and telling how to grow it. This Leaflet is just the thing to hand to every farmer in your neighborhood. Send to the Bee Journal office for a quantity of them, and see that they are distributed where they will do the most good. Prices, postpaid, are as follows: 50 for 25 cents; 100 for 40 cents; or 200 for 70 cents.

☞ See "Bee-Keeper's Guide" offer on page 784.

The American Bee Journal
ESTABLISHED IN 1861
OLDEST BEE-PAPER IN AMERICA

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Editorial Budget.

Mr. Thomas G. Newman—for nearly 20 years editor of the American Bee Journal (1873 to 1892)—is now editor and publisher of The Philosophical Journal, formerly the Religio-Philosophical Journal. In closing his "Salutatory" in the number for Dec. 14, he says that now his "energies will be devoted to the advancement of true Spiritualism everywhere, and the ultimate triumph of the 'harmonial philosophy.'"

Mr. S. E. Miller, who for some time has been writing "Star Apiary Notes" for the Progressive Bee-Keeper, makes his valedictory bow in the last number of that paper, the allurements of a mercantile life outweighing the attractions of the bee-yard. Sorry to lose you, Bro. S. E., for in spite of your common name (so much like Dr. Miller's) you talk uncommonly well. When you've made a fortune behind the counter, you probably will return to bee-keeping again.

Mr. C. P. Dadant—of comb-foundation fame—made the office of Gleanings a visit a few weeks ago. In that paper for Dec. 1, Editor Root says:

> By the way, the junior Dadant [C. P.] has lately come into the proud distinction of "father-in-law." It seemed rather strange to him, but he was getting used to it. His 19-year-old daughter has gone with a handsomer man than he. Congratulations to the new couple.
>
> Although Chas. Dadant & Son, in a business way, meet us in sharp competition, it is a pleasure for me to record that there are no bee-keepers whose friendship we value more highly. Their competition has always been fair, and their business deals strictly honorable.

That "father-in-law" business is news, indeed. I had seen C. P. at the Springfield convention just before he went to Medina, and he said never a word about it. May be he hadn't then recovered from feeling "rather strange" about that "handsomer man" that "hived" his beloved daughter.

The International Bee-Keepers' Congress which met in Atlanta, Ga., Dec. 4 and 5, was a representative gathering of bee-keepers.

The Congress was organized by electing Dr. J. P. H. Brown, of Augusta, Ga., President; A. I. Root, Vice-President; and J. T. Calvert, of Medina, Ohio, Secretary. It was largely composed of old veterans in the business, and taken all together, I am informed that it was one of the most profitable, instructive and pleasant conventions that was ever held in this country. The essays read were of a high order, and some most valuable points were drawn out in their discussion, and also in the discussion of the many questions propounded A full report of the proceedings will be given in the Bee Journal, beginning with the first number for January, 1896, I trust.

The first essay read was by Chas. Dadant, of Hamilton, Ill., entitled, "About Natural Swarming." This was excellent, and gave rise to discussion and criticism.

An essay on "Bee-Culture," by G. W. Demaree, of Christiansburg, Ky., was very good. He rehabilitated an old subject in new thought and expression, and infused into it a charm that, Dr. Brown says, can only be appreciated by an intelligent and cultured bee-keeper.

An essay, or rather, lecture, was given by Frank Benton, on "Bee-Forage,"

Mrs. L. Harrison, of Peoria, Ill., read an essay on "Bee-Keeping for Women," which, beyond question, was one of the best that was ever written on that subject. It was embodied and clothed in Mrs. Harrison's matter-of-fact and practical style; and was written for the benefit of that large class of women who are struggling against the *ills* of an *empty purse.*

"Bee-Keeping a Profitable Industry" was the subject of an essay read by J. D. Fooshe, of Coranaca, S. C.

The Venango County bee-keepers' convention, to be held at Franklin, Pa., Dec. 27, promises to be a good one. Vice-President Jolley has my thanks for a cordial invitation to be present, but of course it is quite impossible for me to be there. Among the subjects, and those to discuss them, are the following:

> The Best Hive to Use—J. F. Hagerty.
> How to Make Our Conventions More Attractive—C. S. Pizer.
> My Experience in Bee-Keeping—H. S. Sutton.
> Fall Management of Bees—J. H. Bleakley.
> Cause of Swarming and How to Prevent It—T. C. Kelly.
> Best Method of Italianizing an Apiary—Yale Yoter.

I trust the Secretary will see to it that a condensed report is forwarded to this office for publication along with the essays read. I wish that every Secretary of every convention held in North America would always do this.

Some Good Advice is coming in response to the three questions I asked on page 780. Thank you, good friends. I hope that all who expect to be clear on our books for 1896 will respond to the questions asked. I want to know what you want in the American Bee Journal. Of course, I can't promise to please you all, but out of the many answers I expect to get a good deal of help, and shall try to use as many of the suggestions as I possibly can.

Lest some failed to see the questions propounded, I repeat them:

1. What department would you like to have more of?
2. What department would you prefer less of?
3. What have you to suggest that you think would be an improvement in the contents of the Bee Journal?

Please reply on a separate sheet of paper from the business part of your letter; or on a postal card, in case your subscription is paid for 1896.

Remember, this is open till Christmas. After that time, I expect to arrange the replies, and see wherein I can follow out the wishes of the majority.

The Standard Dictionary—published by Messrs. Funk & Wagnalls, 30 Lafayette Place, New York—is acknowledged, by the leading educators of both England and America, to be the best dictionary of the English language. But it seems there is one picayune English competitor that has selected from the Standard a few words that might be termed "indelicate" (but which are found in all other good

dictionaries); has printed them with their meanings, and now attempts to misrepresent the Standard by calling it "obscene, filthy, blasphemous, etc." No one with a particle of brains would be influenced against the Standard by such an unwarranted attack, and no one but a vulgar, hyena-headed monster would use such unfair and unchaste means to meet honest competition. When you buy a dictionary be sure to get The Standard. It has no superior, and I doubt if it has an equal to-day. Dr. C. C. Miller, you will remember, was the editor of the bee-terms found in The Standard; and especially in that regard there is no other dictionary that can touch it.

LATER.—On Jan. 1, 1896, the prices of the Standard Dictionary will be greatly advanced, but all orders placed before that time will be filled and delivered to you free of transportation, at the present cash prices, which are as follows:

	2-Vol. Ed.	1-Vol. Ed.
Full Morocco, with Patent Ref. Index...	$22 00	$18 00
Full Russia, " " " ...	17 00	14 00
Half Russia, " " " ...	15 50	12 50
Half Russia, without " " ...	15 00	12 00

As I am acquainted with the resident agent here in Chicago, all orders, with the money for same, can be sent to the Bee Journal office, and I will see to it that they are promptly and properly filled.

Remember, the above prices hold only until Jan. 1, 1896.

Among the Bee-Papers

HONEY AS A COSMETIC.

Here's what that old bachelor—E. E. Hasty—has to say in Review:

"O yes! honey matters are a little down at the mouth; but just rub a little on your wife's *checks*, according to American Bee Journal, page 588, and see how sweet and beautiful she looks next day. Never mind that suggestion that crops may get *insufficient* to rub our faces with."

But that'll do you no good, Hasty, unless some fair Eugenia gets so much on that you *stick* to her.

SIZE OF HIVE.

First, the hive must be large enough to hold sufficient stores and accommodate the colony. To illustrate: Here we have no honey to speak of from July or August till June. Sometimes September will give a living, and sometimes not. At times in April and May a little is gathered and at once used, but *never* added to store. The bees will fly more or less every month, and much in fall and spring, and breeding must start early to keep up the colony, or they perish in early spring from lack of numbers. In March, April, and May, and usually the first half of June, breeding goes on as rapidly as the strength of the colony will permit, provided the old stores are abundant, consuming much honey. I count on about 40 pounds average as necessary, so that, as a rule, an eight-frame hive is not large enough unless *solid full* of honey—no empty combs on which to cluster. So we must use a 10-frame hive, or carry a stock of feed for use in the spring.—R. C. Aiken, of Colorado, in Gleanings.

COMBS FOR WINTERING.

The construction of frames bears directly upon the subject of wintering, particularly in regard to maintaining the requisite degree of warmth. Closed-end frames conserve the warmth of the colony in each range to a greater degree than those with open ends. They are in accordance with nature. The comb structure, whether in a hollow tree, or a box, or a straw hive, is such. My experiments with artificial comb have served to throw much light upon this feature in frames as applied to wintering. Even with closed ends, natural comb is seldom attached more than half way down, while the artificial combs are fixed closely the entire length of each end-bar. As a test of temperature, I placed a thermometer in the bottom of the tray containing saw-dust, locating it directly above the cluster and found the average in colonies containing natural comb to range from 30° to 35° F, while in the wooden comb it stood at 60° when the outside temperature was zero. I made these experiments several times with the same results. Furthermore, the comb spacings in my hives are 1⅛ inches from center to center. The artificial combs are ⅛ of an inch thicker, which limits the space to ⅜ of an inch. Notwithstanding thicker combs and narrower spaces, consequently less bees occupying a given area, a temperature of 60° against 35° is maintained, showing conclusively the advantage of not only having closed ends, but combs attached as closely as possible to the end-bars.—L. A. Aspinwall, in Review.

KEGS AND BARRELS FOR HONEY.

Having told how to wax kegs and barrels, allow me to ask why not use those made of soft wood, which needs no waxing? Leaky kegs and barrels can never be made entirely safe by waxing them. The shrinking and swelling of the wood, as exposed to wet and dry, will break the wax; and sometimes a heavy jar, when moving the barrels, will crack the wax and start them to leaking. Good workmen can make tight vessels, and they cost no more than leaky ones. A barrel or keg properly made of the right kind of wood needs no waxing, and the waxing is quite expensive at best.—G. M. Doolittle, in Gleanings.

FRAMES AND SPACERS.

I dont wish to discourage the Doctor nor my good friends at Medina in their efforts at improving our implements, but it has always been a wonder to me how bright, practical men like these could be led to adopt the Hoffman frame. I know that there are other bright, practical men who use this frame, and it may be that *I* am too dull to discover its merits, but to me it seems like a cross between the loose-hanging frame and the closed-end frame, but lacking the highest merits of both.

The Doctor asks for advice in regard to self-spacers. The most satisfactory with which I am acquainted are closed-end frames; closed the whole length, plain and smooth with the edges pressed so firmly together that no cracks are left in which to put propolis.—Editorial in Review.

EXPERIENCE WITH ROBBER BEES.

One day I found lively times at No. 82—with robbers. I went and got some hay—not a few spears, but a whole armful—threw some loosely at the entrance, and then kept adding till the entrance and the entire hive were covered. Then I got buckets of water and thoroughly wet down the hay, and left the bees to their fate. I left the hay for a week; but there was no appearance of robbers shortly after the hay was put there. When I looked into the hive a week or so later I found a good colony there; but the robbers had emptied the three outside combs before they had been stopped. If they had not been meddled with I think the colony would have been ruined. No. 19, in the opposite row, was having a little trouble with robbers at the same time, but I didn't think it would amount to much. I didn't notice it till a week or two later, when I found it empty of honey, with the queen and a dozen bees. If I had given it a good "feed" of hay it might have been saved. —Dr. Miller, in Gleanings.

BUY OR MAKE HIVES, WHICH?

QUESTION.—I hope to winter my bees in good shape and be ready to use some new hives next summer. Now what I want to know is whether it will be better to buy them ready made, or make them myself, as I am handy with tools and can have plenty of time through the winter. X. Y. Z

ANSWER.—I don't believe I'd buy them ready made, and I don't believe I'd make them entirely myself. Instead of buying them ready made I'd buy the stuff all cut ready to nail together, and then I'd put them together myself.

At the factories where they make a business of making hives and other appliances for bee-keepers they have so many advantages that they can get out the stuff far cheaper than you can. In fact, if you can get anything to do by which you can earn a dollar a day you better take it than attempt to compete with the factories making hives.

In the first place they get their lumber in large quantities and of just the right kind, and so get it cheaper, and in making hives by the thousand they can get along with the least possible waste. Then they have machinery just adapted to the work, and when the machinery is set all ready to cut a certain piece they can rush through a thousand pieces in a short time. With ordinary tools you can't begin to make a hive so accurate, and after you've handled movable-comb hives long enough you'll find out they ought to be made with great exactness.

If you think you can make by hand bee-keepers' supplies as cheap as you can buy them, just try your hand at making a few section-boxes. Even with the best joiner's tools, if you could make five or ten of them in a day it's more than I would expect, and you could buy them for 1 or 2 cents.—Stockman.

Book Premiums for Getting New Subscribers

For **each New** Subscriber to the American Bee Journal sent us by a present subscriber, we will give as a Premium **40 cents' worth** of the Books, Pamphlets, etc., described on this page—figuring on the **retail price** given in connection with each book, etc., below. This is a very easy way to get a lot of most excellent literature.

Free Copy of "BEES AND HONEY" to Every New Subscriber.

Yes, in addition to the above offer, we will mail free a copy of Newman's 160-page "Bees and Honey"—premium edition—to each new subscriber. On **new** subscriptions, the $1.00 will pay for the Bee Journal from the time it is received **to the end of 1896.** NOW IS JUST THE TIME to work for big lists of New Subscribers.

The American Bee Journal List Should Easily Be DOUBLED by Jan. 1st, on these Liberal Offers.

BEE-BOOKS

SENT POSTPAID BY

George W. York & Co.,

Chicago, Ills.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains 250 pages, and 245 illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, $1.00.

Langstroth on the Honey-Bee, revised by Dadant—This classic in bee-culture, has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages; bound in cloth. Price, $1.40.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages; bound in cloth and fully illustrated. Price,

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of Queen-Bees are reared in perfect accord with Nature's way. 176 pages, bound in cloth, and illustrated. Price, $1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopædia of 400 pages, describing everything pertaining to the care of the honey-bees. It contains 300 engravings. It was written especially for beginners. Bound in cloth. Price, $1.25.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is too well known to need further description of his book. He is a practical and entertaining writer. You should read his book. 90 pages, bound in paper, and illustrated. Price, 50 cts.

Rational Bee-Keeping, by Dr. John Dzierzon—This is a translation of his latest German book on bee-culture. It has 350 pages: bound in cloth, $1.25; in paper covers, $1.00

Bienen-Kultur, by Thomas G. Newman.—This is a German translation of the principal portion of the book called BEES OF HONEY. 100 page pamphlet. Price, 40 cents.

Convention Hand-Book, for Bee-Keepers. Thomas G. Newman.—It contains the parliamentary law and rules of order for Bee-Conventions—also Constitution and By-Laws, with subjects for discussion, etc. Cloth, gold-lettered. Price, 25 cts.

Amerikanische Bienenzucht, by Hans Buschbauer.—Printed in German. A hand-book on bee-keeping, giving the methods in use by the best American and German apiarists. Illustrated; 138 pages. Price, $1.00

Thirty Years Among the Bees, by Henry Alley.—Gives the results of over a quarter-century's experience in rearing queen-bees. Very latest work of the kind. Nearly 100 pages. Price, 50c.

Why Eat Honey?—This Leaflet is intended for FREE distribution, to create a Local Market. 100 copies, by mail, 40 cts.; 500 for $1.50; 1000, $2.50.

☞ If 500 or more are ordered at one time, your name and address will be printed on them FREE.

How to Keep Honey and preserve its richness and flavor. Price same as Why Eat Honey.

Apiary Register, by Thos. G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00; for 100 colonies, $1.25.

Practical Hints to Bee-Keepers, by Chas. F. Muth.—Describes his methods of keeping bees and treating Foul Brood. Price, 10 cts.

Preparation of Honey for the Market, including the production and care of comb and extracted honey. A chapter from BEES AND HONEY. Price, 10 cents.

Bee-Pasturage a Necessity.—This book suggests what and how to plan. It is a chapter from BEES AND HONEY. Price, 10 cents.

Swarming, Dividing and Feeding.—Hints to beginners in apiculture. A chapter from BEES AND HONEY. Price, 5 cents.

Bees in Winter, Chaff-Packing, Bee Houses and Cellars. This is a chapter from BEES AND HONEY. Price, 5 cents.

The Hive I Use, by G. M. Doolittle. It details his management of bees, and methods of producing comb honey. Price, 5 cents.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cts.

Dictionary of Apiculture, by Prof. John Phin. Gives the correct meaning of nearly 500 apicultural terms. Price, 50 cts.

Winter Problem in Bee-Keeping, by G. R. Pierce. Result of 25 years' experience. 50 cts.

Handling Bees, by Chas. Dadant & Son.—A Chapter from Langstroth Revised. Price, 8 cts.

Bee-Keepers' Directory, by H. Alley.—Latest methods in Queen-Rearing, etc. Price, 50c.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. Price, 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 25 cts.

History of Bee-Associations, and Brief Reports of the first 20 conventions. Price, 15 cts.

Honey as Food and Medicine, by T. G. Newman.—A 32-page pamphlet: just the thing to create a demand for honey at home. Should be scattered freely. Contains recipes for Honey-Cakes, Cookies, Puddings, Foam, Wines, and uses of honey for medicine.

Prices, prepaid—Single copy, 5 cts.; 10 copies, 35 cts.; 50 for $1.50; 100 for $2.50; 250 for $5.50; 500 for $10.00; or 1000 for $15.00.

When 250 or more are ordered, we will print the bee-keeper's card (free of cost) on the front cover page.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 p.; illustrated. 25c.

Emerson Binders, made especially for the BEE JOURNAL, are convenient for preserving each number as fast as received. Not mailable to Canada. Price, 75 cts.

Commercial Calculator, by C. Ropp.—A ready Calculator, Business Arithmetic and Account-Book combined in one. Every farmer and business man should have it. No. 1, bound in water proof leatherette, calf finish. Price, 40 cts. No. 2 in fine artificial leather, with pocket, silicate slate, and account-book. Price, 60 cts.

Green's Four Books, by Chas. A. Green.—Devoted to, 1st, How We Made the Old Farm Pay; 2nd, Peach Culture; 3rd, How to Propagate Fruit-Plants, Vines and Trees; 4th, General Fruit Instructor. Nearly 120 pages. Fully illustrated. 25 cts.

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(Read Carefully.)

The following clubbing prices include the American Bee Journal one year with each book named. Remember, that only ONE book can be taken in each case with the Bee Journal a year at the prices named. If more books are wanted, see postpaid prices given with the description of the books on this page. Following is the clubbing-list:

1.	Langstroth on the Honey-Bee	$2.10
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37.	Apiary Register (for 50 colonies)	1.75
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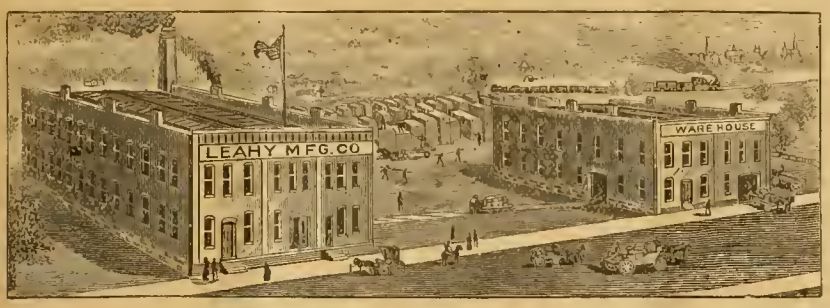

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READERS Of this Journal who write to any of our advertisers, either in ordering, or asking about the Goods offered, will please state that they saw the Advertisement in this paper.

ATTENTION, BEE-KEEPERS!

We are Now Ready to Receive

Shipments of HONEY, both Comb & Extracted and BEESWAX

For the Season of 1895-96. We have made preparations to store Comb Honey in Any Quantity. This is our Fifth Year as a

HONEY COMMISSION HOUSE.

We received 812 Shipments last year. We kindly solicit the business of our friends of former years, and a Trial Shipment of all Bee-Keepers in the Country.

J. A. LAMON, 43 South Water Street, CHICAGO, ILL.

44A10t *Mention the American Bee Journal.*

General Items.

Sweet Clover Leads Again.

MR. EDITOR:—The American Bee Journal has been of great value to me the past year, and as long as I can get for $1.00 the experience of such men as the Dadants, Dr. Miller, G. M. Doolittle, Rev. Abbott, and many others that write for it, you can count me as one of your subscribers. We learn more from them through the Bee Journal, in one year, than we could learn in a lifetime without it.

I am a tenderfoot in the bee-business, but had very good results this year. I had 7 colonies in the spring, that built up well on fruit-bloom, and made preparations to swarm the first of June, but white clover failed, so they gave it up, but held their own until sweet clover blossomed, then the honey began to roll in, and they filled some over 400 one-pound sections, mostly sweet clover honey. I think we shall have to depend mostly on sweet clover in this part of the country; it grows very rank along the roads, and where it is cut or pastured off it blossoms a long time; in fact, till killed by frost. G. W. STEPHENSON.

Western Springs, Ill., Dec. 2.

Results of the Past Season.

Well, the harvest is ended, and I have "rounded up" the work with the bees. I think we ought to give our failures to the public as well as our successes.

There are a good many keeping bees here, and I don't know of any of them that studies the nature of the little honey-bee. They look at it as a sort of off-handed business, but, alas, I am getting some of the old fogies hoodoodled. I read the "Old Reliable," and the leading bee-books, and I keep pretty well posted, and can tell them things they never thought of.

Now for my report: I had 9 colonies, spring count, increased to 18, and took 325 pounds of comb honey. This honey is sold at 10 cents per pound right in my apiary. The average per colony was 18 pounds. Thus any one can see that my income from bees is $32.50. This is no great amount, but I make my living on the farm, and can do very well with that small amount for my trouble with the little stinging creatures.

I use the 8-frame Langstroth hive, and I think it the hive for this locality. I also have the 3-banded Italian bees; I like them much better than the 5-banded ones. I had some of the so-called 5-banded bees, but I got rid of them. Somehow or other we couldn't get along together. They would "fall out" with me in spite of all I could do. J. M. JEFFCOAT.

Pike, Tex., Nov. 26.

No Honey, but Not Discouraged.

I have thought from time to time of writing, but with the loss of 20 colonies of bees in the spring, and no honey, I tell you it takes a little enthusiasm out of me. May be old bee-keepers are used to such things. I lost the colonies from dysentery, although my bees had the best of clover and basswood honey, and plenty of it, packed in outside cases with pure wheat chaff, with cushions and Hill's device on top of the frames. I expected them to come out booming. I had three or four nuclei, and one or two after-swarms. They commenced dying the first of January, and never held up till well on into May. I fed most of them, and in May a good many colonies began to breed up quite lively. There were some quite strong, but about May 15 we had 3 inches of snow; yet on the 9th it was very warm, the mercury at sunrise being at 58 degrees; the bees killing drones, cut queen-cells, then hot weather and then cold during May and June. I had a nice swarm on the first day of June.

I had most of the colonies in splendid condition for the honey-flow, but no rain, and exceedingly dry. No honey. I put on

MAKE A NOTE OF THIS!

ALL READY FOR 1896.

Appreciating the advantages for procuring Basswood Lumber, and the splendid Shipping facilities of Marshfield, we have established a Factory for the manufacture of

THE ONE-PIECE SECTION.

We have all new and up-to-date Machinery for the manufacture of the "One-Piece Section." Have a Saw-Mill in connection with our Factory, enabling us to get the finest material to be had, for "One-Piece Sections."

☞ Write for Price-List, and also for prices on Sections in any quantity you may want.

THE MARSHFIELD MFG. CO.,

Dec. 1st, 1895. MARSHFIELD, Wood Co., WIS.

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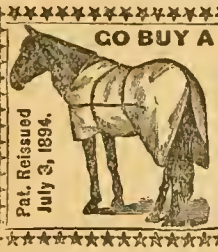

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Your horse is always clean, it keeps the hair smooth and glossy. No surcingle required. No tight girth. No sore backs. No chafing of mane. No rubbing of tail. No horse can wear it under his feet.

No Come Off to Them! Your Harness Dealer Keeps Them.

If not, write us for Free Catalogue and prices. The "STAY ON" Burlington is patented. We protect our patents. **BURLINGTON BLANKET CO. Burlington, Wis.**

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We make a Specialty of these Goods, and defy Competition in

QUALITY, WORKMANSHIP AND PRICES.

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☞ Be sure to mention the American Bee Journal when you write.

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Don't destroy Colonies of Bees diseased by FOUL BROOD till you have read my Circular on the Cure of this destroyer of your apiaries. Circular sent free. Address,

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50A4t Box 783, Belleville, Ills.

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PATENT WIRED COMB FOUNDATION

Has No Sag In Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. VAN DEUSEN & SONS,

Sole Manufacturers,

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WM. A. SELSER,

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In charge of The A. I. Root Co.'s Philadelphia Branch, sells at **Factory Prices,** either at **wholesale or retail.** Having a lot of CHAFF HIVES, will sell at 10 % reduction from lowest Factory Prices.

Beeswax, positively pure, bought and cash paid on arrival.

Also in need of a lot of WESTERN PURE WHITE CLOVER HONEY—cash paid promptly.

WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL

Golden's Feeder!

BEE-KEEPERS:—We can furnish the **Golden Combined Feeder and Hive-Cover,** without Feed Dish [as the Simplicity or any dish answers], direct from factory at the following prices: 1 made up, 30 cents; 1 in the flat, 25 cents; 10 in the flat, $2.00. All orders sent to The A. I. Root Co., Medina, Ohio.

For large orders, write the undersigned for special prices. **J. A. GOLDEN,**

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NEW MAMMOTH Poultry Guide for 1896 Finest book ever published, contains nearly 100 pages, all printed in colors, plans for best poultry houses, sure remedies and recipes for all diseases, and how to make poultry and gardening pay. Sent post paid for 15c. John Bauscher, Jr., box 94 Freeport, Ill.

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the supers. Soon the clover passed away, then I thought I certainly will get a little from basswood. It came and went, too, with the exception of three or four days the bees got a little to live on, then they commenced robbing, but I was there and watched them. I do not think they got the start of me. I read "Langstroth on the Honey-Bee," the "A B C of Bee-Culture," and another book whose author I don't remember, and Prof. Cook's "Bee-Keepers' Guide," to find out what to do under the circumstances. I could find out nothing, only to feed the bees. So I said the last of August, "Here goes for sugar." I went to feeding and making candy, and in September I put them in their outside cases, but did not pack them. Not a pound of surplus honey did I get.

I now began to hear the croakers. I thought it would come out about that way. Did not I tell you? But, said I, "Where is your hay?" Not one ton to where there were 50 in other years, and many farmers had none at all. Now they are calculating to put all their energies to work another year to raise hay, as all of last spring's seeding was burnt up. So with apiculture; stick and hang to it, resolved I am another year.

There were plenty of dead bees in this locality last spring, and no surplus honey this season worth speaking of. I have been around quite a scope of country, on business, and no surplus honey is the cry.

Long live the American Bee Journal.

Ionia, Mich., Nov. 23. JACOB MOORE.

Selling Honey on Commission.

It is seldom that I receive the American Bee Journal without finding something in it that more than pays me the price I pay for it. I am especially pleased with the article by W. D. French, on page 742. Having just had a little experience with these middlemen myself, and not having the faculty of expressing myself as fluently as does Mr. French, I can only say that those are my sentiments exactly. And I honestly think that the honey-producers of this great land of ours are, as a rule, thoroughly disgusted with the manner in which they are compelled at present to market their products.

Of course, we fully understand that high prices cannot always be obtained, but, if after writing for information on the state of the market, etc., you receive a very plausibly written letter, stating that the market is in good condition, and honey is selling readily at from 14 to 16 cents per pound, and that returns for the same can be made immediately, you will (unless you have been there before, and been deceived) take the bait, and ship some honey. And, after you have made the shipment, you can wait six weeks for the prompt returns, and when the returns finally come, you may find, as I did, that instead of 14 to 16 cents your honey was sold, so the middleman said, for less than 10 cents per pound, on the average—the best of it for 12 cents, and the balance for 9, 10 and 11 cents. If you have taken special pains to have your goods in nice shape, and know that it ought to grade No. 1, you will feel somewhat as I do on this subject.

Of course, the editor will not wish to tell whom I refer to, but it would not be out of place for him to do so. To prove this, I quote the last claim in their letter to me:

"We would also like for you to show your sales you get from us, so that others can see what we did for you; and what we are capable of doing for them; and we believe that you can get better prices by letting us handle your honey than you can by selling at home."

Now, the facts in this case are, that this honey would have netted me 12 cents right at home; whereas, after deducting the freight, 10 per cent. commission, cartage, and loss by broken combs (which is the excuse given for the low price), the 549 pounds net a trifle less than 8 cents per pound!

Of course, I want the people who have honey to sell to know just what this one Chicago firm is capable of doing for them,

"THE LITTLE GIANT BOOK-KEEPER."

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AT A GLANCE.

By Expert J. T. BRIERLEY.

A SIMPLE AND CONCISE METHOD OF PRACTICAL BOOK-KEEPING.

With instructions for the proper keeping of Books of Accounts and Numerous Explanations and Forms used in a Commerical business; showing an ENTIRE SET OF BOOKS BASED UPON ACTUAL TRANSACTIONS.

How to take off a Trial Balance sheet; and finally CLOSE AND BALANCE ACCOUNTS; EQUATION OF PAYMENTS; METRIC SYSTEM OF WEIGHTS and Measures.

Containing 144 pp., size, 5 x 8¼ inches, bound in Flexible Russia, indexed, 75 cents each, postpaid.

Special Offer : We will mail this book free as a premium to any one sending us **two** New Subscribers to the Bee Journal for one year (with $2.00), and also send a copy of the premium book "Bees and Honey" to each of the new subscribers; or we will club the book with the Bee Journal for a year—both for $1.60.

GEORGE W. YORK & CO.,
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Discount—5 to 10 Per Cent.
—ON—
BEES & SUPPLIES

Wax Wanted.

I. J. STRINGHAM,
105 Park Place. NEW YORK, N. Y.
Mention the American Bee Journal.

Handy Cobbler $2.00
Family Shoe Repair Kit. 28 Articles
With Soldering Materials.
Bought singly would cost $4.70.

$3 Outfit *Includes* Harness Repair Tools
38 articles, worth singly $6.70. Sent by Express or Freight. Ills. Catalogue free. Agents wanted.
KUHN & CO. Box C6 Moline, Ill.

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COMB FOUNDATION.
Wholesale and Retail.

Quality always the best. Price always lowest.

Working Wax into Foundation by the lb. **a Specialty.** I can make it an object for you in any quantity, but offer special inducements on straight 25 or 50 lb. lots. Or for making large lot of Wax into Foundation. I am furnishing large Dealers, and can also please you. **Beeswax taken at all times.** Write for Samples and Prices, to

GUS DITTMER, AUGUSTA, WIS.
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1895 SAVE MONEY 1895

If you want first-class *FOR BUSINESS,* **ITALIAN QUEENS** **Foundation** at Wholesale Prices, **Hives,** suited for the South, or **SUPPLIES,** send for Price-List—to

J. P. H. BROWN, AUGUSTA, —GA.—

TRY us. We sell your Poultry, Veals, Fruits and all produce at highest prices. DAILY RETURNS. For stencils, prices and references, write F. I. SAGE & SONS, 183 Reade St., N. Y.

WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

so I take this means of complying with their earnest request. I notice that their advertisement fails to appear in the Bee Journal now. I presume it drew too much trade.

Now, Mr. Editor, if I have said anything that lays me liable to prosecution, don't fail to print this on that account.

Loyal, Wis., Nov. 25. L. M. WILLIS.

[Mr. Willis,) a plain statement of facts that can be proven—such as you have given—I think should be published. It may help others to steer clear of those who make too extravagant claims in the commission business.—EDITOR.]

Hives—The Season of 1895.

Why this everlasting "confab" about "big and little hives," that we see in almost every issue of the "Old Reliable?" Yet few give the size they prefer, and it looks to me, if the question was put directly—"How many square inches of comb space does your hive contain?"—many would be unable to answer, further than to say, "The Simplicity, or Gallup, or Adair is my size," or others would say the 8 or 10 frame. A hive that suits in the South is not the one to winter successfully in the Middle or Northern States. It appears as if all the hive-makers have an "ax to grind," and want the public to turn the stone.

The hive I use contains 1,058 inches of comb space, inside measure, and I find this large enough to winter on the summer stands, if properly attended to.

As others have been reporting their success (good and bad), I will give mine in part.

The spring opened in good style, with the bees in pretty fair condition, but the severe freeze we had in May, destroying fruit-bloom and all other flowers, pretty nearly settled the honey-business for the early part of the seasou. My bees did not have as much houey Juue 1 as they had April 1. But buckwheat let us out. I got 95 pounds from one colony, 56 from another, and so on. I had four swarms in August; one gave me 19½ pounds, another 16 pounds, and another 12 pounds of surplus honey, and all are in good coudition for winter. I think we will make it pay better next season. My crop of about 450 pounds is nearly all gone, at from 16 to 20 cents per pound.

Success to all bee-keepers, including York. T. C. KELLY.

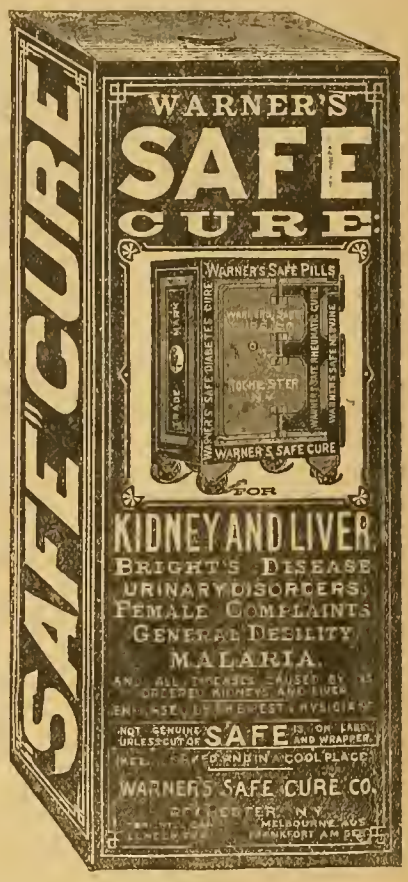
Slipper Rock, Pa.

An Experience in Selling Honey.

The case of Mr. Willis, on pages 764 and 765, on selling honey on commission, differs from mine only in this respect, that I sold a quantity of houey for a certain price, to be paid for as soon as received. Now, Mr. Editor, I wish you to print my statement in this case, as I do not intend to say anything that I cannot prove. It is simply this:

September 15, last, a man giving his name as H. C. Dingsman, 344 Humboldt Ave., with C. R. Horrie & Co., Chicago, Ill., came to my place and introduced himself, saying he was buying honey, and carrying, as an introduction, in one hand, a copy of the American Bee Journal, also a pocketful of stencil marks, with C. R. Horrie & Co., Chicago, Ill., on them., and also numbered. After examining my honey, he offered me 11 cents per pound, delivered on the cars, with the understanding that all I had to do was to pack it properly, and put it on the cars; then it would be in their possession, and they would run all risks of damages. As soon as received by C. R. Horrie & Co., he said they, without delay, would send me the money for the same.

He wanted it shipped as soon as Sept. 18. It was then Friday, and he wanted it shipped by the next Wednesday. As I was not prepared with the regular shipping-cases, he said that would make no differ-



Miniature facsimile of Warner's Safe Cure Wrapper

Fine Basswood, White Sage or Alfalfa
EXTRACTED HONEY
—For Sale.—

We have made arrangements whereby we furnish **Basswood, White Sage** or **Alfalfa** Extracted Honey, in 60-pound tin cans, on board cars in Chicago, at these prices: 1 can.

in a case, 8½ cents per pound; 2 cans in one case, 8 cents; 4 cans (2 cases) or more, 7½ cents. Cash MUST accompany each order.

☞ A sample of either kind of honey will be mailed to an intending purchaser, for 10 cents, to cover postage, packing, etc. We guarantee purity, and that what we ship will be equal to sample.

Now it seems to us that here is a splendid chance for any bee-keeper to supply his home demand after his own crop is all sold. Or, why not begin now to create a local honey-trade? Order one 60-pound can first, and start out among your neighbors and friends, and see what you can do. You ought to get at least 15 cents per pound in 5-pound lots, or 50 cents for 3 pounds. Some may be able to do even better than that, though we think that enough ought to be sold at these prices to make a fairly paying business out of it. Give it a good trial. Push it. It may grow into a nice winter's work for you.

GEORGE W. YORK & CO.,
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Will Exchange —Concord Gravevines for Fruit, Grain or offers.
50A **F. C. Morrow, Wallaceburg, Ark.**

ence, that any common boxes would do. He went with me and we selected some cracker-boxes, and he said that they were all right. I took them, cut them down to fit a certain number of sections, then packed them carefully, without marring a section; and as I live less than six rods from the depot, they were all carried and put on the cars without a jar or injury of any kind, and shipped the 18th as requested. There was 663¾ pounds of first-class, selected white honey.

I waited a proper time, and received no answer. I then wrote Horrie & Co., and on Sept. 28 they wrote me stating they had received my honey, but it was unsold. I then notified them of the condition of the sale, "without delay." I got no further reply until I sent them another letter, requesting them to settle the matter up; that I was in need of my money. Then on Nov. 4, they sent me a draft for $26, with a letter accompanying it, saying that they hoped I would now be satisfied. I wrote them that I was not satisfied, when they replied that they had done the best they could for me. I wrote them again, and gave them another week to settle it up, and have not heard anything more from them.

I am not in any worse fix than some of my neighbors here, that shipped at the same time, under the same agreement, and up to date they have received nothing.

E. B. HUFFMAN.

Homer, Minn., Dec. 21.

Wintering Bees in Box-Hives.

I have seen so much about bees being kept in warm quarters in winter—chaff-hives, bee-cellars, quilts, sawdust, forest leaves, a few loads of fodder, and all of that sort of things; but I believe that if a colony has a good hive, and all the stores the bees want, and are kept dry, they will come out all right in the spring. But I do believe that bees will withstand more severe weather in a box-hive than they will in a movable-frame hive, and for this reason: Last winter I had 12 colonies of bees—5 in box-hives, and 7 in the Langstroth Simplicity hives; 4 of the latter were in a little bee-house that I had made for that purpose. Now all of the others were out-of-doors, and on the summer stands. The house was simply made to hold a few colonies of bees for the use of our family. It was made 16 feet long and 4 feet wide, with a stand inside for the hives to rest on, the same length as the house, 15 inches off the ground. The house is open the full length of it on the east side.

Now 2 of the colonies in the house died, of what I thought was diarrhea, and with plenty of honey in the hive. I was thinking the 4 in the house would be all that I would save, as the weather was so terribly cold here. The mercury was as low as 22 degrees below zero.

While the two in the house died, all that were outside were all right, with the exception of one colony, and it was in the movable-frame hive. It was very weak in the spring. I examined the combs, and found only a few bees and no queen, so I gave them a queen, and they soon built up to a strong colony.

What makes me think that bees do better in box-hives than movable-frame ones, as I stated above, is, they stand the cold weather better in that kind of a hive. Five of the outside colonies were in box-hives, and 4 of them were up off the ground a foot, on a stand—nothing around them. The summer previous I had bored inch holes in the tops of the 4 hives to put some sections on, so there were from 5 to 7 holes in each top of the hive; you see there was a good draft up through the hives, with nothing to cover it on top to protect it, and they winter very well without being carried to the cellar, or put into double-walled hives, and all that sort of thing.

Of course, I do not want any one to think that I want to tell old bee-keepers what to do with their bees, but I am going a little by the colonies that I have spoken of above.

Linton, Ind., Nov. 30. GEO. SAGE.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Dec. 10.—White clover and linden, in 1-pound sections, sells at 14@15c., but other kinds of white honey sell at 12@13c.; dark and amber grades, 9@10c., of which there is a very liberal supply. Extracted, white, 5½@7c.; amber, 4½@5c.; dark, 4@5c., difference in price of each grade being in accord with its quality, fine flavor always being at a premium. Beeswax, 28@30c., and selling upon arrival. R. A. B. & Co.

CINCINNATI, O., Dec. 10.—There is no life in the business. All kinds of honey are in good supply, with rather a slow demand for this time of the year. Best white comb honey sells at 12@15c., in the jobbing way, while there is almost no demand for all off grades. Demand for extracted honey is fair at 4@7c. on arrival.

Beeswax is in good demand at 22@27c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, MO., Dec. 9.—The supply of extracted honey is not large, and the demand is good for white. We quote: No. 1 white, 1-lbs., 13@14c.; No. 2, 12@13c.; No. 1 amber, 12@13c.; No. 2, 10@11c.; dark, 8@10c. Extracted, white, 6@6½c.; amber, 5@5½c.; Southern, dark, 4@4½c.

Beeswax, 22@25c. C. C. C. & Co.

PHILADELPHIA, PA., Dec. 9.—Honey has steadily advanced in this market. Comb honey sells quickly and pure white clover extracted sells on sight. We quote: Fancy comb, 16c.; choice, 14@15c.; dark, 10@11c. Extracted, 5@6c.; Western white clover, 10c.

Beeswax finds immediate sale on arrival at 30c. W. A. S.

NEW YORK, N. Y., Dec. 9.—We have a fairly good demand for white comb honey at 12@15c., according to quality and style of package. While the market is well cleaned up of glassed sections and paste-board cartons, unglassed is plentiful, having just received two more big cars from California. Buckwheat comb is very dull, with a plentiful supply. We quote 9@10c., but to effect sales on quantity lots, we find it necessary to shade quotations. Considering the limited outlet and large stocks on the market, we would not encourage shipping of buckwheat honey for the near future, as we could not render returns in reasonable time. The market on extracted is quiet at unchanged prices. No demand for buckwheat as yet.

Beeswax is scarce and selling at 29@31c., according to quality. H. B. & S.

CHICAGO, ILL., Oct. 16.—We never had as good inquiry for honey as this fall, and never sold as much. We have not received as good prices owing to the amount of California stock unloaded on this market, which was sold at a very low price, both comb and extracted. We quote: No. 1 and fancy, 13@15c.; amber and dark, 8½@11c. Extracted, 5@7c. Beeswax, 28c. J. A. L.

BUFFAALO, N. Y., Oct. 14.—Honey is in good demand. We quote: Fancy, mostly 16c.; choice, 14@15c.; buckwheat sells slowly at 10@12c. Extracted very quiet. Will advance liberally upon all choice shipments of honey.

Beeswax wanted at 28@30c. B. & Co.

NEW YORK, N. Y., Nov. 8.—Demand for comb honey is very good, particularly fancy white, and is moving out about as fast as it arrives. We quote: Fancy clover, 1-lbs., 15@16c.; white, 13@14c.; fair, 11@12c.; buckwheat, 10@10½c. Extracted, buckwheat, 5@5½c., with supply equal to demand; white clover and basswood, 6@7c., with supply short and demand good; Southern, 50@55c. per gallon. Beeswax, 27@29c.; extra fancy, 30@31c.

C. I. & B.

ALBANY, N. Y., Nov. 9.—Our honey market is in good shape, although prices, like on most all products, are not high; but receipts are lighter than last year, and there is a good, steady demand, with a real scarcity of white honey. We quote: White clover, 15@16c.; mixed clover, 12@14c.; dark clover, 9@11c. Extracted, white, 6½@7c.; mixed, 5½@6c.; dark, 5@5½c. H. R. W.

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HILDRETH BROS. & SEGELKEN, 120 & 122 West Broadway.
CHAS. ISRAEL & BROS., 486 Canal St.

Kansas City, Mo.

C. C. CLEMONS & CO., 423 Walnut St.

Buffalo, N. Y.

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WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

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Convention Notices.

WISCONSIN.—The annual meeting of the Wisconsin State Bee-Keepers' Association will be held Thursday and Friday, Feb. 6 and 7, 1895, in the capitol building at Madison. The program will appear in due time.

Platteville, Wis. N. E. FRANCE, Sec.

PENNSYLVANIA.—The Venango County Bee-Keepers' Association will hold its 3rd annual convention in the City Hall, at Franklin, Pa., Friday, Dec. 27, 1895, beginning at 9 a.m. All persons interested in bee-culture are cordially invited to attend. O. L. GREENLEE, Sec.

Utica, Pa.

TEXAS.—The Southwest Texas Bee-Keepers' Association meets at Wharton, Tex., at the apiary of W. O. Victor, Dec. 26 and 27, 1895. Everybody is invited and bee-keepers especially. Come, and let's have the largest meeting Texas ever had. Low rates on all railroads. J. O. GUIMSLEY, Sec.

Beeville, Tex.

IOWA.—The third annual convention of the Central Iowa Bee-Keepers' Association will be held in the Farmers' Club room at Oskaloosa, Iowa, Dec. 26 and 27, 1895. An interesting program has been arranged. Holiday excursion rates. Good hotel accomodations at $1.00 a day. Come, and bring questions for the Question-Box. This is the largest convention in the State, and should be well attended.

W. E. BRYAN, Sec.-Treas.

New Sharon, Iowa.

NEW YORK.—The Seneca County Bee-Keepers' Association will meet in Templar Hall, at Hayt Corners, N. Y., Thursday, Dec. 19, 1895, at 10 o'clock a.m. All interested in apiculture are cordially invited. The ladies are solicited to come prepared to serve dinner and share in the pleasures of the occasion. An interesting program has been prepared for the entertainment and instruction of those present. C. B. HOWARD, Sec.

Hayt Corners, N. Y.

The Special Meeting of the Illinois State Bee-Keepers' Association will be held in Chicago, at the New Briggs House, northeast corner of Randolph St. and Fifth Ave., on Thursday and Friday, Jan. 9 and 10, 1896—the week of the National Cycle Show—when excursion rates will be given on the certificate plan—for 1⅓ fare for the round trip. Certificate must be secured at the starting point, or no reduction will be granted on return. Before return ticket is secured, certificate must be signed by the Secretary of the Cycle Exhibition Company, and vised by the joint agent of the railway lines, whose offices will be in the Exhibition Building. Tickets to Chicago may be purchased (and certificate taken), on any day between Jan. 1 and 11, and the return trip commenced on any day between Jan. 4 and 15. Chicago hotel rates are 75 cents each, per night, two in a room; $1.00 if one in a room. Meals extra—pay for what you order, or go elsewhere for meals, if preferred.

Bradfordton, Ill. JAS. A. STONE, Sec.

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

For the Prevention of Burr-Combs.

Query 999.—To prevent burr-combs, is anything as good as the Heddon slat honey-board? If so, what?—Ohio.

J. M. Hambaugh—A ¼-inch bee-space.

Rev. M. Mahin—I have found nothing else so good.

Chas. Dadant & Son—Wide top-bars or thick ones.

J. A. Green—I know of nothing as satisfactory in all respects.

Mrs. L. Harrison—It is satisfactory; I never tried any other way.

H. D. Cutting—Yes. The Dr. Tinker honey-board, and several others.

E. France—I don't know. I don't trouble myself about burr-combs.

Prof. A. J. Cook—I never saw anything, but the spaces must be exact.

G. M. Doolittle—Wide top-bars to frames will do away with burr-combs.

P. H. Elwood—Yes; better a proper bee-space, and plenty of surplus room.

Mrs. J. N. Heater—I have used the zinc queen-excluders with good results.

Jas. A. Stone—I think any way the top-bars are made thicker is just as good.

W. G. Larrabee—I think correct spacing is as good as anything for burr-combs.

R. L. Taylor—Nothing that I know of, if burr-combs attached to sections are meant.

C. H. Dibbern—Yes, I have found the top-bars just as good, and far less bother in handling.

W. R. Graham—Burr-combs give me but little trouble. A proper bee-space given everywhere in the hive is the best remedy I know.

B. Taylor—My slotted top-bars are, and remain the freest from burr-combs of anything I have tried. The skeleton honey-board works well in connection, but is not a necessity.

Dr. C. C. Miller—Of late years, for some reason the Heddon honey-board does not succeed with me as it did at first. Thick top-bars and proper spacing seem to do better so far as I've tried them.

Allen Pringle—I gave up the use of honey-boards nearly 20 years ago, and have no intention of returning to them to prevent burr-combs, or for any other purpose. I use quilts, and am not troubled much with burr-combs.

Eugene Secor—Yes, thick top-bars, properly spaced. The Heddon slatted honey-board is a good device, and about indispensable with the ordinary thin-top frames. But it is possible to make such a frame that it will not be needed.

J. E. Pond—I do not know that the "Heddon slat honey-board" is of any special value in preventing burr-combs. Many plans have been devised for this purpose, none of which give perfect satisfaction. Close spacing of frames, that is, spacing them bee-space apart, or so near as to allow the bees to just work between them, is, in my opinion, the best means yet devised for the purpose.

Rev. E. T. Abbott—Yes; a proper bee-space between the frames and between the frames and the supers. A slatted honey-board is a needless expense in the production of honey, unless it is queen-excluding, and then it is needed only for extracted honey.

Dr. J. P. H. Brown—I have no experience with the Heddon slat honey-board. There is more fuss made about burr-combs than there is any occasion for. Bees will always make them more or less with any sort of contrivance, but less with thick top-bars.

G. W. Demaree—Heddon has no slat honey-board any more than the rest of us have, who have used the slat honey-board in the long years ago. He is entitled to the "break-joint" feature of the slat honey-board, however, for what it is worth. Yes—decidedly *yes*—the all-metal queen-excluder is the best remedy against *space* combs.

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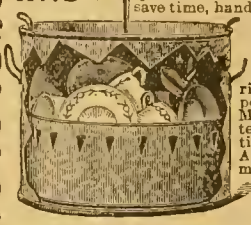

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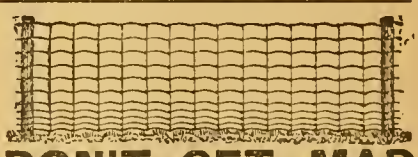

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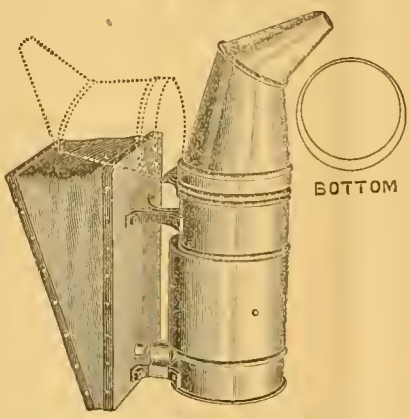

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35th Year. CHICAGO, ILL., DEC. 26, 1895. No. 52

Contributed Articles.

On Important Apiarian Subjects.

Large Hives; Size and Shape of Hives; and Conditions Necessary to Safe Wintering of Bees.

BY CHAS. DADANT.

(Continued from page 790.)

I was confirmed in the idea that large hives are better than small ones, by another remark which I made at that time, at the apiary of one of my neighbors. He had five or six hives in a covered apiary facing south. Those hives were placed upon strips made of inch lumber, two inches wide, and nailed edgwise on stakes driven into the ground, so as to form a sort of rack. The hives had no bottom-boards, for our friend thought that bees succeeded best when they had plenty of air. Although the hives were very large, the bees, during the hot season, would build their combs downward in the empty space below, and during a good honey crop they even extended them on the sides and upwards; so that combs were built between the hives, and most of his hives showed, on the outside, the rudiments of combs that had been cut off with a knife. Strange to say, colonies in these hives wintered successfully, and we were very much astonished, in one of the hardest winters, to find that he had not lost a single colony, while our losses had been heavy.

Here is another instance: I went to a sale in the neighborhood. This was in 1868. The farmer was selling out, and I wanted a cow and the bees that he had, if not too high in price. He had five hives, one very large, the others all small. It was in March, the weather was cold, the bees were not flying. I went to the hives and tapped the boards. The bees in the small hives answered "Zzzz;" those in the large hive said "Booooo," and one or two bees showed themselves at once at the entrance. This settled the matter in my mind—I knew which hive to buy. When the turn came of the bees to be sold, they asked me, as a bee-man, to turn the hives over, so the buyers could see what they looked like. I turned the large hive, and a dozen inquisitive heads glanced in, but the bees soon had every farmer routed away, and no one cared to look at the other hives.

I bought the large hive at $7.00, while the others were sold to other parties at $5 or $6. I bought also a cow at that sale, for which I paid $30.00. The colony, transferred into a large movable-frame hive, filled every frame of the latter with its brood-combs transferred, while the average of those box-hives, ordinary size, would not fill over six frames. This hive yielded, during that summer, 160 pounds of comb honey, which, at that time, sold for 28 cents per pound, and its harvest not only paid for the cost of the hive, but also for the cow I had bought at the same sale. The purchaser of the other hives got next to nothing from them.

It was with the above kind of observations that my attention was first attracted to large hives in comparison with small ones, and all my later experiences confirmed this original remark, although, at that time, I did not attempt to explain the cause of this disparity.

While I was becoming convinced of the superiority of large hives by the above-mentioned experiences, another bee-keeper —Jasper Hazen—was describing, in the American Bee Journal, the hive and method which he employed. His hive was enlarged so as to allow of placing surplus boxes on the sides as well as on top of the brood-nest. As the honey-extractor was then not yet in use, he did not enlarge the size of the brood-nest, but would increase the harvesting capacity of his colony by adding to it the population of another hive. Disposed as I I was to take hold of anything that would tend to increase the honey-yield, I hastened to make Quinby hives with side room enough to give the bees six 5-pound boxes on each side of the brood-nest (the section-box was not yet invented), six behind it, and enough space on top to place, in all, over 150 pounds of honey. As I knew that an experiment made on one hive or two cannot be conclusive, I built 28 of these hives. We still have 8 or 10 of them in our apiary. The result did not come up to my expectations. The honey-bee has the instinct of placing its honey above the brood, in a place where it may be easily accessible during cold weather, and where the cluster is placed directly between it and all intruders.

My bees filled all the surplus boxes at the top, and the upper part of the side tiers; but the lower tier of boxes was not filled at all, except in one or two exceptional instances. The side boxes had to be placed at the top, in order to get them filled too. When the boxes were removed, these 28 hives had room in the lower story for 14 Quinby frames, or about 150,000 cells, and they gave me an excellent opportunity to ascertain the fecundity of the queens; for, being unable to have them filled with box honey, we placed combs in them, which were to be run through the extractor. The queens, in these hives, had room for 7,000 eggs daily. This number was too great, and thus I had a chance to see to what capacity we could extend our hives without overdoing the job. The conclusion was that 85,000 cells for the brood, or 8 Quinby frames for brood, and two frames for supplies were about the right number. I thus reduced my hives to 11 spaces, keeping one space for a dummy, and the other ten for frames. I have never had occasion to regret this.

If I were to start again, however, I would make the Quinby frame a little shallower, so as to be able to use 12-inch boards for hive making. A half inch of difference would secure this. We would also make the length of the top-bar the same as that of the Langstroth hive, which would secure uniformity in the surplus cases with those already in use so far as length is concerned. A hive of this size and style is now largely in use in Switzerland, France, Spain, Italy, and a little in Germany, under the name of "Modified Dadant" hive, because I introduced this style there, through the Revue Internationale d'Apiculture. Each comb, in a hive of this size, has a surface of 193 square inches, and leaving two combs for the supplies, pollen and honey, we have 81,800 cells, which, divided by 21—the number of days which it takes for bees to hatch—gives the queen 3,900 cells per day.

Many people will say that, with such a large hive, one cannot produce comb honey. I beg to say this is an error. I have produced lots of comb honey with large hives, although it was then in small boxes and in Adair section-frames; but the pound section is just as convenient as the Adair frame, and much more so than the glass box of old, which was so objectionable to the bees, owing to the inability of ventilating it in hot weather. It is worthy of notice, however, that in bad seasons, when the weather is such, during the Spring, that the queen cannot make use of all her powers of fecundity, a small hive would succeed better, if we could not reduce the space in these large hives so as to fit the needs of the colony. This is

very easily done with dummies, and we find ourselves in the same condition as the 8-frame bee-keeper, with the difference that he cannot enlarge his hive gradually as occasion requires, unless he doubles its capacity by tiering up two hives, which is making too much of an enlargement at one time.

But, in our own practice, although we contract our hives, when the colony is feeble, to keep it warm, we never try to harvest any honey unless the lower story is filled to the full capacity. Here, evidently, our 8-frame bee-keeper thinks he has the advantage over us; but we do not think so, and we will tell you why in another article. Hamilton, Ill.

The New Constitution for the Union.

BY THOS. G. NEWMAN.

In reply to Dr. Miller's strictures, on page 790, kindly let me say that I wish he had had the work to do, and then I think he would feel differently. I labored diligently to get the matter before the Committee, at as early a date possible. Then the Report of the Committee, as first drafted, was sent to each member, and all were invited to criticise it. They did so, and then the amendments suggested by each one were formulated and again sent to the other members of the Committee for consideration. Some approved, while others did not. Finally, after several of such revisions, all agreed on the Report of the Committee, as now published.

Then, the Constitution of the National Bee-Keepeers' Union had to be revised by members of the Union, so as to be submitted (for voting) on January 1, 1896, when the General Manager's Report will be sent to the members. This proved to be more tedious than the Committee's Report. After scores of changes were suggested by the different members, it was put into type and sent for further consideration and revision. Then more suggestions came, making other revisions necessary, and all were printed and again sent out for consideration. When this work was all done, the Constitution was sent to the bee-periodicals to be published, so as to have the whole thing discussed, and further suggestions made.

Now that is being done, and in order to accommodate *all*, I will not have the Report printed until after January 1st. Every person interested can therefore have full opportunity to criticise and offer amendments.

All the suggestions that are deemed practical, will be incorporated into the Constitution when presented for a final vote. The suggestions of Dr. Miller are good, and will receive full attention. The "secret ballot" matter is, however, quite unnecessary. When it is *written*, it certainly is definite, and unchangeable. I see no objection to having a committee count the ballots and declare the election, if it is preferred. But "secrecy" is totally unessential in this case, I think. The Executive Board could appoint a "Committee on Ballots," who may have full charge of them, and count and declare the election. Anything in reason, I am in favor of. I have "no ax to grind;" I never wanted the office of General Manager, and am quite ready to give place to my successor when elected.

The suggestions about Canada, given on page 793, are quite in order; and while the omision was unintentional, I may say that the matter as recommended will be incorporated into the copy to be voted upon. It was rather strange, however, that such were not suggested by some of the three Canadians on the Committee. It was evidently an oversight—but one that is already remedied.

Let us have a full, free, careful and friendly criticism. The "best"—the nearest to perfection, is just what was desired by the members of the Committee and others who helped to formulate the New Constitution; and if *all* interested will now help to make it even better than when it was first published, no one will be better pleased than the writer.

Chicago, Ill., Dec. 12.

An Experience in Wintering—Report for 1895.

BY GEO. W. WIRT.

In the fall of 1894 I put 75 colonies into my cellar, Nov. 5, tiering them five hives high with the exception of 10 colonies I wished to experiment with. The 65 hives were arranged with the entrance in front entirely open the width of the hive, being a 10-frame Langstroth-Simplicity hive. I also had an open space at the back of the hive, half an inch high, and the width of the hive. The bottom-boards are nailed to the hive. This gave the bees, as I thought, plenty of air from the bottom. The 65 had sealed honey-boards on top, and no upward ventilation, or no ventilation from the top. On five I took off the top, also the honey-board, and covered the frames with two thicknesses of unbleached cotton-cloth, and on the cloth a piece of felt paper the width of the hive and 12 inches wide. The paper in almost all of the hives covered the majority of the bees, leaving a space of just the cotton-cloth. I closed the bee-entrance, giving them no ventilation from below.

Four of the others I prepared the same as the five above, with the exception of the felt paper, giving them only the cloth on top. One I removed the top and honey-board, leaving nothing on top; closed the entrance below, giving no ventilation from the bottom, and about twice a month I gave them a good shaking up. I believe it is generally understood that bees must not be disturbed while in winter quarters, and I am of that opinion myself, but for all that the colony came through all right. They used some more honey than the other colonies, but aside from that I could see no difference.

The colonies with sealed covers came through the poorest of any. Those with the cotton-cloth and felt paper were in fine condition in the spring, with combs clean and bright, and less dead bees on the bottoms of the hives; and that is the way I have prepared my 140 colonies for this winter.

I see Mr. B. Taylor has very much the same arrangement, with the exception of ventilation—he ventilates the hive from the bottom. I would not dare to do it, as it would form a current of air through the colony which, to my mind, would be injurious, but I take much stock in Mr. Taylor, and am free to admit his superiority with the bees, for three years ago he wintered his bees with a loss of only about 40 per cent., while I lost 253 colonies, being every colony I had. Most of the bees in this vicinity died that winter, the trouble being bee-diarrhea.

By the way, Mr. Taylor says he expected to put his bees into a dark, ventilated cellar. What is he doing with the bee-houses he was recommending for wintering bees in, a few years ago?

I took 4,000 pounds of comb honey in one-pound sections from my 140 colonies this year, two-thirds of it being dark honey. We had but very little honey from linden, as the early frost killed the buds, and the drouth of 1894 killed all the white clover; but, as Mr. Taylor says, I think 1896 will be the great honey year, as everywhere white clover is in abundance, and Mother Earth is once more well watered.

I would like to say something about the large and small hives, the spacing of brood-frames, and so on, but the matter has been so thoroughly gone over with, that it seems almost useless for a man of my small capacity to gibe in, but for all that, I have some ideas of my own on the subject. I will just say here that I use closed-end frames in the brood-chamber, and I venture to say that the time is not far in the future when nine-tenths of all the bee-men will use the same, for the reason that they cannot afford to use any other. I will tell you why, some of these fine days. Oronoco, Minn.

[Mr. Wirt, I hope you will feel free to send on those ideas you have now locked up in your head. All will be interested in reading them.—EDITOR.]

What Dr. Miller Thinks.

THE CALIFORNIA HONEY-EXCHANGE.—Those Californians have my heartiest wishes for success, and I'll watch with much interest the outcome. Such things haven't heretofore panned out well, but I'm more hopeful about this.

CHAS. DADANT AND BIG HIVES.—For years and years the Dadant's have kept on using large hives, notwithstanding they partly went out of fashion, and through all the hot discussion as to big and little hives they have maintained a sort of exasperating silence. When I was down at the Springfield convention I tried to anger C. P. (the son) into standing up and giving in print whatever facts they might have to justify them in holding so stubbornly on their way, but all I could get out of him was a good-natured laugh, along with the assertion that their position was well known. But now the father has opened up on page 789, and I'm wondering before he gets through how big a hive he'll want us to have.

As I read the vigorous article on that page, I can't help wondering at two things. One is, that the elder Dadant can use the English language as he can in writing. He makes out very poorly at talking it—you're pretty sharp if you can understand his broken English at all—but who would think he had any trouble with the language from seeing his work on the printed page? The other thing that surprises me is the won-

derful vigor of mind for a man of such advanced years. He will be 79 years old next May, and yet he seems to be as bright as ever in all respects save one—and that is, he doesn't know enough to enter his dotage when he has arrived at the proper age therefor! In this last respect he's inconsistently idiotic.

Perhaps I'd better label that last remark as a joke, for I came near getting into trouble once from omitting the label when I spoke of the Dadants as "those miserable Frenchmen." A reader of Gleanings not knowing of the warm feeling between the Dadants and myself, "roasted" me for my remarks. I suppose I deserved it.

Overstocking a Locality.—F. L. Thompson says, on page 790, that he wishes I would tell how I know when there is a poor yield. Well, Bro. Thompson, I know it just as you do—by finding my supers left unfilled. Now are you satisfied?

But I'll not be mean enough to leave it at that, but take your request as you meant it, and you can settle with the Bee Journal office for tampering with your punctuation and putting in that semicolon where it wasn't needed. Or did you do as I so often do—leave out the punctuation so the puzzled compositor might guess at it?

You want to know how I can tell whether it's overstocking or the season that's to blame for a poor yield. The fact is that I can't tell. But I just won't agree with you that there's something shaky about the idea that the bees crowd one another on the blossoms more in a poor season than in a good one. That is, if you mean by that, that when nectar is so scarce that a given number of bees have hard scratching to get a living, that number can be doubled without making the chances any poorer for each. Surely, you don't mean there isn't such a thing as overstocking, for you plainly say you believe that Mr. Carlzen's locality is overstocked; but perhaps I misunderstand you in some way, and I shall be glad of further enlightenment. That saying, that when a season is good for 200 it's good for 600 in the yard, is one of those half-truths that sometimes make mischief. Suppose in a good season 200 colonies can do well, you certainly will not deny that the number might be increased until all would starve? Now, will you?

Chicago Honey-Prices.—On page 791, the editor is quoted as saying, "It seems to me that the actual wholesale selling prices of honey on the very day the dealer quotes should be given." There's no particular point in quoting those words and then leaving it at that. What I meant to have added was, that I always thought and still think that the dealers so meant the quotations to be understood. Will the editor please tell us how he understands them?—[I've been waiting for some honey-dealer to "pick me up" on that remark. I think when I wrote it I must have had in mind circular quotations that some dealers send out by mail.—Editor.]

Buildings for Wintering Bees.—I'm somewhat skeptical about the success of such things, but if a man has succeeded in wintering in a special building, that's an argument that carries weight. So I'm much interested in the experience of L. M. Willis, as given on page 791, and am wondering whether he owes his success to the very thick hollow, or rather stuffed, wall. If such a building can be confidently relied on, it would meet the wants of a great many. Will Mr. Willis, therefore, please answer some questions? What is the inside measure of your building? How many colonies have you kept in it? How many years have you used it? What is the actual per cent. of loss from the time of putting in till the first of the following June? When did you, or when will you, put them in this winter?

Apiarist and Bee-Keeper.—I sympathize with my Canadian friend in his desire for words that express fine shades of meaning, as expressed on page 793; but I think he hardly makes out that an apiarist is any other than a bee-keeper. Indeed, after fully arguing the case and apparently proving that an apiarist is much the smarter man of the two, he backs down from his position by saying, "If 'apiarist' is not satisfactory." There's a weak spot in his logic when he says an apiary "is supposed" to have a lot of "fixins." I never understood that a smoker was part of an apiary any more than a curry-comb is part of a horse-barn. And I don't think that the possession of an apiary necessarily implies bee-lore. If he should sell out his apiary to-morrow, wouldn't the man that bought it possess an apiary, even if he didn't know a drone from a worker?

What Does He Mean?—Quoth ye editor on page 796: "I do not know what bee-keeper crated the honey bought, but whoever it was, he will crate, sort or grade, no more for me." Does he mean he'll never, no, never, buy another crate of honey?—[No, sir; he didn't mean that, at all, for he has bought another crate since then, but it was *not* put up by the same bee-keeper, as the first crate came from Arizona and the second from Wisconsin. *Locality* makes lots of difference—in some things!—but this time the difference must have been in the bee-keepers. I expect to continue to buy crates of honey hereafter just as heretofore, for I try to set a good example by eating honey at least twice a day, thus doing my share toward finding "a market" for reducing the surplus honey crop. If every one of the seventy millions of people in the United States would eat all the honey they ought to, they would feel better—and so would the bee-keepers who would thus find a ready demand for all the honey they could produce, and at a good price.—Editor.]

The North American Bee-Keepers' Union.—On page 793, the Canadian representative takes it to heart that in the new Constitution Canada has been left out. Shake, my Arctic brother, shake. We're both in the same boat. Left out United States, too!

Marengo, Ill.

Phenol Cure for Foul Brood.

BY I. W. BECKWITH.

With the editor's permission, I will criticise Mr. Clarke's criticism on my former article with the above heading. He says:

"He quotes me very unfairly by merely giving my statement that all who tried the phenol cure on its first appearance failed to make it a success. Why did he not give the reason I gave for their failure? Reason enough—the bees never took the medicine."

Mr. Clarke did *not* tell us in his first article, that "the bees never took the medicine;" nor any intimation that that was the trouble. On the contrary, he says Mr. Cheshire made the treatment a success, and published the recipe to the world; that great numbers tried this same recipe, and all failed. Does he mean to say now that "Cheshire was 'content with putting the phenol in the hive,' and that was the recipe he published to the world, and which others tried?"

I am well aware that "there is no germ of the disease outside of the microbe and the spore;" and that is where the trouble lies, for these germs or spores are contained in every cell that has ever contained the diseased larvæ, and all such comb must be removed from the hive or be disinfected. It seems to me that Mr. Clarke's witty illustration of putting the blister on the tool-chest fits nothing but his own case, and that *exactly*. He tells us that all those who tried phenol used it as they were told; but he feeds some acid to the bees in order to disinfect the comb where they deposit none of the medicated syrup, and says: "This is a thoroughly scientific mode of treatment."

He now tells us, "There is no difficulty, as he supposes, about using phenol during a moderate honey-flow;" but in his former article says, "It must be fed to them when there is no honey to be gathered,.....They will do this if they have no honey to gather from outside.....They must have no other resources." After making the statement so very emphatic, repeating it three times, I supposed he meant what he said.

"He quotes me very unfairly" in saying I "assert that both Mr. Cheshire and Mr. Clarke were deceived." Why did he leave out the word, "probably?"

As Mr. Clarke has made so many mistakes in his articles on pages 590 and 706, it is reasonable to suppose he would be liable to make some in his experiments and reports.

I still think, as I said before, that the encouragement is not sufficient to justify me in trying phenol, especially when I compare his article on page 174 with what he has said since.

Grover, Colo.

Lengthened Life in the Bee—the One Important Object in Breeding.

BY WM. S. BARCLAY.

Can it be that the assembling of the North American Bee-Keepers' Association at Toronto, Ont., awakened our Canadian brethren to new life? Far be it from me to assert they have been leading the lives of drones in the hive, for many and valuable notes from their pens we have had from time to time, but permit me here to say that no more valuable or practical article has appeared in the columns of the "Old Reliable" in the past year, than that written by Mr. VandeVord, on the

"Importance of Longevity in Bees;" and I know of no better way to class it than to say it is *common sense boiled down.*

I have been an occasional contributor to the Bee Journal for more than one-fourth of a century, and although I never could claim for myself the name of being a diffident or backward man, it was always with much hesitation that I attempted to open up a new question for discussion among my fellow bee-keepers, and here comes in the question of theory *vs.* practice. Pardon me for here charging that we have had too much of the former, and quite too little of the latter.

How well do I remember that in the early '70's, when our "old favorite" had not attained the distinction of a "weekly journal," and after I had bred the Italian bee for four or five years, I wrote an article asserting that I could procure more honey from the *first cross* of the Italian with the German bee (either the Italian drone with the German queen, or the German drone with the Italian queen, *preferring the latter*) than I could obtain from a pure colony of either variety. I said to my wife that I would surely arouse the displeasure of queen-breeders, and thus get my hands full of trouble. But how glad was I to see in the next monthly, where my notes appeared, a splendid article from one of our best honey-producers, taking nearly the precise position I had; and how much more glad was I to see in the succeeding monthly, an article from a prominent queen-breeder, candidly admitting that his experience had led to the same conclusions. Then I felt safe, and glad, because my observations had been carefully and honestly made.

So, as regards the article of Mr. VandeVord, let me here say that if I was asked what is your first requisite in the breeding of the queen-bee, my reply would be: "Longevity in her worker progeny." One point in relation to this will, I presume, scarcely be controverted. Of all the points in the breeding of bees this one is the most difficult to arrive at a satisfactory conclusion upon, for the reason that it requires the closest, longest, and most difficult observation.

I had not long practiced the crossing of different varieties of bees until I noticed the prominent fact observed by Mr. V., viz.: "That the colony having a small space of brood, *regularly kept up*, stored more honey than those crowded with brood;" but I was a long, long time in learning why such was the case, but observing that the honey was still accumulating rapidly, I did not conclude as did Mr. V., *to remove the queen.* What lead to the discovery of the facts in the case was this: How many of us who worked bees in supers and sections for comb honey, have anxiously watched colonies thus prepared, and which appeared to be extremely industrious, only to be disappointed upon looking at our sections, only to find that little progress had been made. Instead now of watching the sections, I make my observations *at the entrance of the hive;* if indications there do not lead me further, I have no need to examine the sections.

A few reflections on the habits of bees at work, led to the following conclusions: We all know that bees (some say young bees), in almost all colonies, sport before their hives. Years ago the question arose in my mind, "Is it *only young bees* which do this?" and "Do they *all* only do it at this time?" Observe two colonies of equal strength within a few feet of each other—while one appears full of excitement and very industrious, the other works quietly and steadily along, and without any excitement. But if you have an alighting-board (as you should have), observe that in the steady-working colony many of the bees are strewed away down the board so heavily laden with honey that they could not reach the entrance. Go to the active colony and you find scarcely one-third their force heavily honey-laden, and the rest merely sporting before their hive. Query: Why should not some varieties of bees be given more to sport than to work? Again I ask: Do all bees only sport at a certain time, and only at that time? Closest observation teaches me to say no; most emphatically *no!*

Although I feel I could enlarge with profit upon the important questions opened by Mr. VandeVord, I will only say further to those who are willing to investigate it: In examining the amount of brood, be sure that numbers do not decrease, and do not dethrone a queen which may be the most valuable in your apiary, without just and sufficient cause.

I feel like saying that if we ever reach that apparently much wished for object—"the prevention of swarming"—it will be upon the line of investigation suggested by Mr. VandeVord.

In closing I may say that after an experience of 30 years I have no reason to change my opinion in relation *to the first cross* of the Italian and German bee, but all has been in confirmation of the assertion then made. I am in doubt, however, as to whether it would hold good in the first cross of either of the yellow varieties, but have reason to assert that a first cross of the German with either of the yellow varieties (the Syrian, Cyprian or Holy Land) will produce the same result. May I go still further and say that this gives just cause for the assertion that in the production of the future "Apis Americana," it will be necessary to have at least a touch of German blood? Upon this point, as well as a comparison of the dark or leather-colored Italian, with the golden and 5-banded Italians, I hope to have a word to say in the early future.

Beaver, Pa.

Do Bees Reason, or Do They Not?

BY DR. E. GALLUP.

This is a nut for some of the smart ones to crack. Years ago, when I lived in Wisconsin, I had a swarm of bees leave me and start east. The following March I went with my team to cut up a large limb of a burr oak, and haul it home for firewood. I found a few bees on the snow, and knowing that they could not have come from home, I looked around for them. I saw what looked like a sheet of white comb, about 30 feet high, where the large limb split out of the tree. Now here was my swarm of Italians. They had built their combs from rear to front, and the hole that the limb made was in the form of a V, about 10 inches deep, and 6 or 8 inches wide at the top. To protect themselves from the west wind they had built a sheet of drone-comb across the entrance, with cells on the inside of the comb, but none on the outside, and the outside of this door or curtain was glazed over. This could not have been built in winter.

I built a substantial platform, or staging, sawed off the top of the tree, and let it fall. Then I sawed off the log about 4 feet long that contained the bees, lowered it with ropes onto the sled, and hauled it home, and of course transferred them in the spring. Back of where this branch had split out, there was quite a cavity for the hive.

Again, in California I found a swarm or colony in a clump of willows, within one mile of the ocean, nothing intervening to break the force of the cool west wind directly from the ocean. They had evidently been there three or more years. The combs were attached to a limb about 1½ inches in diameter; the first or center comb attached to the under side of the limb, the next two were attached to the sides and built out over the center comb with brace-combs on the under side to keep them from settling on the center comb; the next two—one on each side—were attached to the same limb, and built out nearly horizontal, with brace-combs underneath, until they were out far enough to extend them perpendicularly. Now here were five combs, the center one about 12 inches wide and 18 inches deep, the next two a little narrower and shorter, and the outside ones still smaller. Then there were two drone-combs attached to the limb at each edge of those combs, built concave next to the combs, and convex on the outside, and thoroughly attached to the edges of the other combs with braces.

Now, the wind would teeter the mass of combs, both up and down, and sidewise, but they were braced so that all moved together. The outside drone-combs had no cells on the outside, and neither did the side or worker-combs have any cells at the top, and all was thoroughly glazed with propolis on the outside except the two worker side-combs where they had cells on the outside.

You can readily see that those bees had solved the wintering problem for themselves, and were thoroughly protected from rain and wind. All those combs were built extra strong at the top. Of course, if we had some of our extra-hot Eastern weather they would have been apt to have melted, as they were right in the sun except for about three hours in the middle of the day. When the leaves were off they had the full benefit of the warm sun in winter.

Those two cases, to me, look awfully like "reasoning." I could cite similar cases, but the above will answer to begin with.

Santa Ana, Calif.

Liberal Book Premiums are offered on page 814, for the work of getting new subscribers to the Bee Journal. It is a fine chance to get a complete apicultural library. Think of it—40 cents' worth of books given to the one sending a new subscriber! Remember, please, that *only* present subscribers to the Bee Journal can take advantage of that offer. The publishers of the Bee Journal believe in making it an object for the old subscribers to push for new readers among their neighbors and friends, hence the generous premium offers to them. It is hoped that all may begin *now* to work. Sample copies of the Bee Journal free.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Sweet Clover Probably the Best.

1. Which plant would be best to sow on waste places and pastures without doing any injury to the place, such as getting into the fields? Is sweet clover very good?

Over one-third of my bees have already died this fall from the moths. U. T.

Leon Springs, Tex.

ANSWERS.—1. I have some doubt whether you could strike anything better than the one you mention—sweet clover. It will spread along the roadside and in waste places, but it is a rare thing for it to get a foothold in the fields. If it should get in, it isn't hard to get out, for it is a biennial, dying out root and branch at the close of the second year. So if it is kept cut down the second year so as not to go to seed, that's the last of it. By a little attention to the matter you may train horses and cows to eat it, and thus have a valuable forage plant, both for green feed and for hay, as well as an excellent honey-plant.

Transferring Bees.

1. The hive I use is a chaff one, after Falconer's pattern. The outer wall is of ⅛-inch lumber, plowed and grooved together. The inner walls are ⅜-inch lumber, the height of the brood nest. The size of brood-chamber is 14x16x9¼ inches, with chaff packing space 2 inches all around. I use 10 frames, 16¾x1⅛ inch top-bar, 9⅛ deep. On top of these hives I can use the T supers or pattern-slat supers of 28 sections, or almost any other super I wish. As for single-walled or dove-tailed hives, I can screw one piece on each end ⅝x2, and it is ready to take on any 28-section super, either a T or pattern-slat.

As to the size of frames, if I change from these it will be for the deeper. I winter my bees with an arch device, and forest leaves packed on top of them. I make all my hives, supers, and accessories for my small apiary and a few for friends, by foot-power machinery.

2. I will give my experience in transferring last spring. I bought a colony in a hive for $1.00 and transferred it to movable-frames, according to the old method, that is, remove the honey, brood and suitable combs, and filled up the balance of the hive with comb foundation. It paid well. They gave me 70 capped sections, 14 uncapped, and plenty for winter. I tried to do the job under Heddon's new way, by the instruction in the "A B C of Bee-Culture;" I also tried another colony in a nail-keg, and failed in both instances. I followed instructions by drumming for about two hours, and I could not get them up into the box for that purpose. I operated both colonies the same way, by turning the hives bottom side up, and drumming with sticks on the sides, puffing smoke in here and there, where I could get smoke in, and could not get them up.

I have the balance of my bees to transfer in the spring, if they winter. If you can give a few pointers on this, please do so. I am like the boy—I will try again—that is, Heddon's new way, by putting on full sheets of foundation, instead of running them into a small box. I will put on a small 5-frame hive, with a couple of frames of unsealed brood from another hive. If there is anything I should or should not do, please inform me.

I practice spring feeding to stimulate early brood-rearing. For using the feeder, simply pull back the quilt from one side, and uncover three frames, and lay the feeder on. By the construction of feeder, the most of the heat is retained in the brood-nest. A. M. S.

Koch, Ohio, Nov. 25.

ANSWER.—I really don't know why you should fail in drumming the bees out. Certainly two hours was long enough for any reasonable bees. Possibly you were too mild-mannered in your pounding, for it should be no gentle tapping but a pounding that would make the bees think their house was coming down about their ears, and the best thing would be to save their lives by getting out of it. Whether the smoke did good or harm depends upon how it was used. If blown in at the junction of the hive and the driving-box, it might drive them down instead of up, for bees are inclined to retreat before smoke. Unless there was a place of entrance somewhere near the ground, the smoke would hardly help.

I think your scheme of putting a couple of frames of brood in a hive to drum them in will help. Indeed, if you turn the hive upside down and set over it the new hive with one or two frames of brood, and leave it thus for a day or so, you'll find a goodly number of bees taking care of the brood. Of course, the bees must be allowed to fly out. Then it will take less time to get the rest of the bees drummed up than if they were to go into an empty box.

Possibly you might like this plan: Wait till the bees swarm, and then hive the swarm in your frame hive, setting it on the old stand and putting the old hive close beside it. In four or five days remove the old hive to a new locality, and that will make a pretty sure thing of it that there will be no second swarm. In 21 days from the date of swarming all the brood will be hatched out, and you can then drum out the bees into a frame hive. Having no brood to protect they will be more easily driven.

Wintering in a Large Hive—Swarming, Etc.

Suppose I make a hive 20 inches square, outside measure, and allow a swarm to fill the hive before extracting any, and winter the bees with every pound of honey in the hive that they gathered through the season, extracting all just before the honey-flow in the spring—

1st. Is there any advantage in wintering bees with a large hive full of honey?

2nd. Will they breed up better in the spring?

3rd. Will a two-story, 13-frame Langstroth hive prevent swarming?

4th. Is the honey just as good where left in the hive all winter?

Please point out all defections and advantages in this plan.

Davison, Mich. E. B. T.

ANSWERS.—1. I suppose the thing might be overdone, but there are advantages in a good supply of honey. For one thing, you can feel secure against the danger of their running out of stores and starving if you feel sure they have a good deal more honey than they can possibly use. Without being able to see any good reason for it, you will sometimes see one colony use up two or three times as much stores as another colony that appears, so far as you can see, to be just about the same. So it's a good plan to let every colony have more than as much as you think will be used by the colony that uses the most.

2. B. Taylor—and he's a man whose opinion I respect—thinks it's just as well to have enough stores on hand at all times so there's no danger of immediate want, supplying from time to time as the supply runs low. But I think nearly every one else is agreed that bees will breed up better in spring if, on taking stock, they find quite a surplus on hand so they needn't be anxious about the future. I certainly would rather my bees should at all times have stores ahead. Another item is, that it's easier to keep a small space warm than a large one, and if the cells are filled with honey there's just that much less air-space to keep warm.

3. A two-story barn wouldn't always keep bees from swarming. But as a rule they will swarm less in a large hive than a small one. I should hardly expect half as much swarming in a two-story (or a one-story) hive containing a total of 13 frames, as I would in a hive containing only eight frames. If you mean 13 frames in each of the two stories, I should expect still less swarming. But remember that no amount of room will always, without fail, prevent swarming.

4. If the honey is well ripened before cold weather sets in, it will probably be just as good. If thin, it may candy. With a good, strong colony, well wintered, I should expect the honey to be as good in spring as it was the previous fall, and in some cases better.

Honey from Mountain Laurel.

The following clipping is from the New York Sun, of Nov. 26, 1895:

"TRENTON, N. J., Nov. 25.—Dr. Wm. Elmer has received from Theodore G. Wormley, the analytical chemist of the University of Pennsylvania, a report on the samples of honey sent to him last week. Mr. and Mrs. John S. Chambers, of this city ate some of the honey and narrowly escaped death.

"Dr. Wormly says he has failed to find any metallic or organic poisons, but that experiments made upon dogs show that

the honey contains a most prompt and potent poison, which produces all the symptoms observed in the cases of Mr. and Mrs. Chambers, and caused the animals' death within a few hours. He says the symptoms resemble those observed in reported cases of honey-poisoning in which the poison was attributed to honey collected from the *Kalmia Latifolia*, or mountain laurel, which is abundant in this State. The honey which poisoned Mr. and Mrs. Chambers came from Ocean county, where there is much mountain laurel growing in the pine barrens.

"Dr. Wormley says the plant has long been known to possess poisonous properties, but repeated examinations by different chemists have failed to separate the poisonous principle or determine its chemical properties. He will continue his examinations, in the hope of making the discovery.

"Several of the leading grocery stores in the city have honey that was supplied by the same Ocean county bee-keepers, but they have had no demand for it since the reported case of poisoning, and the incident is likely to result in a boycott of the bees."

The circulation of such reports (unchallenged by any of the recognized authorities on the rearing of bees and the production of *pure* honey), will effectually put a stop to the consumption of honey in New York, Brooklyn, and vicinity.

Is it possible for the bees to store honey which will have such an effect upon the human system, that consumers of it narrowly escape death? J. W. S.

Brooklyn, N. Y.

ANSWER.—Mountain Laurel—*Kalmia Latifolia*—has always had the name of producing poisonous honey. It seems a little strange, however, that any real case of poisoning therefrom, even in a mild form, is so seldom heard of. For mountain laurel is no new or rare plant. It grows by the acre over a widely-extended surface, and if honey from it be such a terrible thing, there ought to be sicknesses, if not deaths, constantly occurring. In my native place in Westmoreland county, Pennsylvania, the beautiful flowers of the mountain laurel grew in profusion every year. Yet I never heard of a case of honey-poisoning anywhere in that region. I wonder if the case in question is not very greatly exaggerated. Possibly "narrowly escaped death" may simply mean that they were made sick, as they might be from injudiciously eating candy or any other sweet. It is entirely in the range of possibilities that the imagination of an enterprising reporter has been drawn on pretty heavily.

Canadian Beedom.

Five-Banded Bees—Spores of Foul Brood.

As announced on page 796, the annual meeting of the Ontario Agricultural and Experimental Union was held at the College in Guelph, Ont., Dec. 12 and 13, and a large number of subjects came up for discussion. Among others a summary of experimental tests with five-banded bees was given by Mr. R. F. Holtermann, Director of co-operative experiments in apiculture. It had not been a favorable season for bees, but so far as tested the five-banded strain had not distinguished themselves by any special marks of superiority.

The Director further stated that Dr. Howard, author of a pamphlet on foul brood, had advanced the idea that exposure to the atmosphere would sterilize, if not absolutely kill, the spores of the disease, and some experiments not yet completed were being made to test his theory.

Some discussion was had on both these topics. It was thought that on the whole the five-banded bees were inferior to those with fewer bands, and much doubt was expressed in regard to Dr. Howard's foul brood theory as to the sterilization of spores.

Mr. R. L. Taylor's Comparison of Section Comb Foundation.

Michigan's apicultural experimentalist has had another trial of section comb foundation. It comfirms the result of a similar trial last season so far as to show that the Given foundation appears to be preferred by bees, but strange to say an old sample of Given, manufactured a year before the experiment was made, easily leads all the others in quality. It is especially superior in the texture of the wax from which it is made, and far excels the hard, brittle samples of Given that were compared with it. No one has ever supposed that age improved the quality of foundation. The element of superiority must plainly be the wax. Now, then, why is some wax hard, brittle, and uninviting to the bees, while other wax is of opposite qualities? This is the question before the "meetin' house."

The most remarkable thing about this experiment is the great difference shown in the quality of the two samples of Given foundation, and that is in favor of the sample which had been the longest made and was also lightest in weight. So far as I can deduct practical conclusions from this double series of experiments, I would be inclined to note the following:

1st. That all the samples of foundation made by the leading manufacturers are good enough to give excellent results, that of the Dadant's being a good second to the Old Given.

2nd. That, after all, the shape or style of the cells does not matter so much, the all-important thing being to have the wax so pure, soft, ductile, and easily moulded that the bees have no difficulty in fixing it to suit themselves.

3rd. That it might be an advantage to have that sample of Old Given foundation analyzed, or its exact composition ascertained in some way or other.

The Demise of Three Bee-Papers.

It is a very prosy, matter-of-fact obituary notice that is given on page 781, of three defunct bee-papers. Usually when the decease of a human being is noticed in the newspapers, there is something said about the history, career, and virtues of the departed. In the present case we are simply told that they have "dropped out of existence." Has nobody a word of eulogy or a tear of regret for them? Kirke White says:—

> "The autumn leaf is sear and dead—
> It floats upon the waters' bed;
> I would not be a leaf to die,
> Without recording sorrow's sigh!"

There are instances in which the death of human beings is an actual relief to survivors, and I am unfeeling enough to to say that I would not be sorry if two or three more bee-papers would give up the ghost. So far, Nature's great law of "the survival of the fittest" appears to have gone into effect, and I hope it will continue to be so in any farther instances of mortality, among bee-periodicals. Dr. Watt's lines in regard to some human beings would apply with a little emendation to a certain class of bee-papers:—

> "There are a number of us creep
> Into this world to eat and sleep,
> And know no reason why they're born,
> But merely to consume the corn,
> Devour the cattle, fowl and fish,
> And leave behind an empty dish.
> And if their tombstones, when they die,
> Wer'nt taught to flatter and to lie.
> This, and this only, would be said—
> That they have eat up all their bread;
> Drunk up their drink, and gone to bed!"

OLD YEAR, GOOD-BYE.

Old Year, good-bye; you've borne from me
That which has been full half my life for twenty years,
And left me naught save sighs, unanswered prayers and tears.
My dead lie low beneath the frozen clay;
No grass grows green above their narrow bed. In vain I call,
No answer comes from earth or sky to bring me back my all.

Old, tear-stained Year, good-bye, I weep no more;
You bear with you, sad year, what tears I have to give;
My eyes are dry, and in their fountains tears no longer live.
If for all time could I but be at rest,
And pass away serene and still, like you—my mission o'er,
It would be sweet, and I could ask of Heaven nothing more.

Old Year, you go, but I must wait awhile,
And do the part that has been set for me to do, and smile
When others smile, and laugh, though my poor heart should break the while;
For children's voices sound, sweet, echoing chimes,
That bind me still to earth and time, and bid me grieve no more.
A New Year dawns. The world will still go on just as before.

And so to you, Old Year, I say good-bye.
The New Year's light shall through the mist of tears a radiance send.
Behold! "Lo! I am with you always, even to the end."
So, while I strive as best I may to be
To those I love all they have lost, and fill my own place still,
Perhaps in His own time and way I yet may do His will.

—MRS. A. L. HALLENBECK, in Progressive Bee-Keeper.

Among the Bee-Papers

BROWN SUGAR CANDY FOR WINTER.

My bees were all wintered last year on stores of sugar syrup. A few colonies had cakes of sugar candy besides. Most of the candy was made of granulated sugar—the rest of light brown sugar. The colonies that had the brown sugar candy were the ones that came out ahead in the spring. Why was this?—Mrs. A. L. Hallenbeck, in Progressive.

LYSOL FOR FOUL BROOD.

Lysol has cured many colonies of foul brood by simply being fed to them, if we can believe the reports. It may cure for the time being, but suppose there is old, infected honey sealed up in the hive, and, later, this is unsealed and fed to the brood, foul brood will be again developed unless my reasoning is greatly at fault. How is this, Lysol feeders?—Editorial, in Review.

ATMOSPHERIC CONDITIONS.

That other Miller, in American Bee Journal, of October 24, quotes from Progressive what I had to say regarding atmospheric conditions in relation to nectar secretion, and then asks: "Well, and suppose you do find out just the right conditions for nectar yielding, what are you going to do about it? What can you do to change the condition of the atmosphere?" I must confess I did not expect that question to be thrown at me so soon, but I'll tell you, Doctor, if you will promise not to tell any one else: I don't know.—S. E. Miller, in Progressive.

SOMETHING WRONG WITH THE FIGURES.

"According to American Bee Journal, page 573, France, in 1893, produced 6,432,607 pounds of honey, and 4,427,157 pounds of beeswax. Don't believe it. Something the matter with those figures. My bees will not produce 4 pounds of wax to each 6 pounds of honey; and I decline to believe it of the French bees."—Hasty, in Review.

Another discrepancy is that the price of honey is 32 cents a pound, and wax less than 20 cents. But the figures were taken from the U. S. Government Report, which often gets pretty well mixed up on figures as well as on some other things.

BEES GOOD-NATURED IN THE SHADE.

Mr. Muth-Rasmussen once stated that bees are better-natured in the shade, and his statement was poo-booed. A neighbor had an apiary that made the life of himself and family a burden. They were the most vicious bees I ever saw, and were a constant annoyance to me as well, so I bought them. He had them out in the shade of a row of apple-trees, within a few feet of a public sidewalk, and in the shade they are as gentle as any bees I have. Eastern apiarists should remember that conditions with us are entirely different from the East. If they could stand their bees and themselves out in the heat when the thermometer registers 112° in the shade, they'd soon find both the bees and themselves changing their angelic dispositions.—E. H. Schaeffle, in Gleanings.

NOT MUCH OF A FARMER.

Dr. Miller may be a good writer, (and I spect he is), but he's a mighty poor farmer. He raises too much straw for the grain. No, I mean, that is, I think there's too much *grain* in the straw. Pshaw! I mean—well, I guess I'll give it up this time. But I *know* he ain't any farmer, no way.—Observer, in Progressive.

THE DADANTS AND LARGE HIVES,

The "Home of the Honey-bees" has again been favored with a call from another prominent bee-keeper and supply-man. This time it was C. P. Dadant, the foundation-maker, of Hamilton, Ill. Unlike some of our recent visitors he did not call in the interest of his health to see Dr. Lewis, preparatory to going onto the beef-diet cure. Oh, no! he was the very picture of health. Typhoid fever had left him (as it often does its victims) several notches better in health.

It will be remembered that the Dadants have been the pioneers in the advocacy of large hives—not simply ten frame Langstroth, but ten-frame Quinby—frames that are 18⅛x11¼ in. instead of the L. size, 17⅝x9⅛ inches. When I asked C. P. how they still stood on the hive question he replied that they were of the same opinion still. They have tested the matter over and over again on an extensive scale, with whole apiaries, only to find in every case that the large Quinby gave the best results. They had no "ax to grind," as it made no difference to them which style of hive or frame was adopted.

I told him it must be somewhat encouraging to them to note that, while they at first apparently stood alone, now a change *toward* their views and practice seemed to be slowly coming on. Yes, he said they long ago decided that time would vindicate their position.

In France the large Dadant-Quinby hive, among intelligent bee-keepers, is almost the standard.

The Dadants keep now only about 350 colonies. They have kept as many as five and six hundred. Besides their large foundation business, and the bees, they are extensive growers of grapes. C. P. looks after their business interests while the elder Dadant attends more strictly to bee-literature. While he has not written much of late for the bee-journals of this country, he is a constant contributor to the French journals; and in that country, if I am correct, he is counted as the highest authority.—Gleanings Editorial.

FLAVOR OF EXTRACTED HONEY.

QUESTION.—What is the best plan to preserve the flavor of extracted honey?

ANSWER.—To give extracted honey a fine flavor it must be thoroughly ripened. While some have evaporators, both sun and other, which they run extracted honey through or over, that has been extracted in its thin or green state, till it is of nice quality and consistency, as well as having an excellent flavor; yet, in my opinion, no honey has quite as nice flavor as does that which has been left on the hive till the end of the season, the bees having been allowed to ripen it till it is so thick that it will almost stand alone after being taken from the comb. Of course, it is more work to extract such honey; but by keeping it in a room whose temperature is nearly or quite 100°, for four or five hours, it can be extracted very nicely. When extracted, honey should be stored in tin or earthen vessels, and kept in a dry, warm atmosphere that is free from odors. Loosely cover, and let it stand in this warm, dry store-room till all the air-globules have disappeared, the scum that arises being skimmed off, when the honey can be put into glass or tin vessels, ready for sale or family use, and it will retain its fine flavor for years if kept in a proper place.—G. M. Doolittle, in Gleanings.

TWO COLONIES IN ONE HIVE.

Mrs. A. L. Hallenbeck says in Progressive: "Last year I put all the weak colonies two in a hive with division-boards between them. Nearly all of them came out one colony in the spring, managing in some way to get together. Would it not have been just as well to unite them in the fall?"

Others have practiced the same thing, Mrs. H., and only failed when a passage was left in the division-board. Make this tight, and you're at least better off in the number of queens.

EIGHT-FRAME HIVE WORKED IN TWO STORIES.

Now, in working for comb honey (and I work almost exclusively for that), I put a second hive-body, full of drawn-combs, about May 1, on all strong colonies. That makes a 16-frame hive, and (I have had no trouble about queens refusing to go up into the upper story when crowded for room below) that gives all colonies a chance to build up strong for the honey-harvest, which begins here about June 10, from white clover. At the beginning of the honey-harvest I take off all those second stories. I fill up the under story, or hive proper, with brood, of course being sure the queen is below; and if there is any more brood than will fill up the hive I strengthen up weak colonies with it, or make increase. In this way I confine my working force on eight frames; and by putting on the surplus-arrangements as soon as the second story is taken off I always get my share of the honey, if there is any to get. I do not want any larger hive than the eight-frame, for comb honey, for eight frames give all the brood room I want after putting on the surplus-arrangement; and if I used a larger hive I should have to use dummies; and I do not like to use them, for various reasons. I also find, when wintered in the cellar, the above hive gives all the room necessary for winter stores; and an eight-frame hive full of bees makes a *pretty strong colony*, and the eight-frame hive is much handier to lift in and out of a cellar. When bees are kept where the person keeping them has too much other work to do to attend to them properly, I think a large hive would be preferable; but for a practical bee-keeper who understands the proper manipulation of bees, the eight-frame hive is about right here—F. L. Murray, of Wisconsin, in Gleanings.

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OLDEST BEE-PAPER IN AMERICA

George W. York, - - Editor.

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Editorial Budget.

A Merry Christmas to all the readers of the old American Bee Journal is my sincerest wish at this most joyful season of the whole year.

Mr. Frank B. Pease is a rising attorney here in Chicago. At one time he was my room-mate, and so I feel that I know him quite well. His office is Room 1214 Tacoma Building, corner Madison and La Salle Streets. Now I think he would be a good man to whom to refer any complaint that a reader of the American Bee Journal may have against any one here in Chicago. I am sure Mr. Pease will treat you fairly, and will attend to any business placed in his hands with promptness and satisfaction. Often complaints are sent to me, and I am asked to look them up and report. I have not the time to do it, while Mr. Pease has. That is his business. When writing him, just say you saw this notice in the Bee Journal, and he will take special interest in you and your requests.

That "Observer" Man, in the December Progressive Bee-Keeper, referring to Editor Leahy's recent Chicago and general-visiting-around trip, says: "Wish we all could be editors for awhile, don't we?" That's not a good observation, "Observer." Especially if you'd want to be an editor just so you could have a chance to "go for" some body, or simply to go and see some one. Lots of people imagine an editor has a very easy job. But such people know more about bee-keeping in the moon than about editing and publishing bee-papers. After nearly twelve years' experience around a bee-paper office—such experience as I've had—those would-be editors, I'm inclined to think, would sing a different tune. "Observer," "things are not always what they seem." Better be contented with your present way of living, rather than to hanker after an editor's job—unless you want to work both day and night.

The End of 1895 has come, so far as Volume XXXV of the American Bee Journal is concerned. This is the last number for this year. The record is written—the book is finished. I trust that all who have traveled along with the Bee Journal the past year, will conclude to continue through 1896. I am sure I don't wish to part company with one of the readers, and I hope we shall all be permitted to keep on the way together.

I am deeply grateful for past favors, and confidently look for increased support by wide-awake bee-keepers everywhere, in order to enable the old American Bee Journal to retain its proud position of being *the best* as well as the oldest bee-paper in America. The Bee Journal and its excellent and able corps of contributors have done their full share toward all the advance steps of modern and progressive bee-culture; and it has endeavored to keep its readers fully informed concerning all apiarian developments as far as they have arisen and secured a foothold.

The past long years of successful efforts of the American Bee Journal can be but its guaranty for the future. What it has been in all that is good and helpful it will try to improve upon, until it shall shine forth to enlighten and guide every true bee-keeper who will permit it to brighten his pathway.

Bees in Winter is a small pamphlet we are entirely out of, and we expect to have no more of them. It was a chapter taken from the book "Bees and Honey."

The American Bee-Keeper most cordially endorses the Report of the Amalgamation Committee, in the following paragraph:

We think the report is acceptable in every way, and should be adopted by the so-called North American Bee-Keepers' Association as soon as possible. The Union is an association which has been and will be of great benefit to the bee-keeping fraternity, while the North American is, and has always been, of no benefit to any but a few who receive various pecuniary benefits or the questionable honor of holding an office. Long live the Union.

Just why the editor of the American Bee-Keeper should think it necessary to speak so lightly of those who have for many years stood by the North American, I cannot understand. Surely, some of the very best men have been among its office-holders, and labored hard to place bee-keeping upon an enduring basis long before Editor Merrill or I were known to the bee-keeping world. I don't believe the writer of that paragraph wants all of it taken in earnest.

The Southwest Texas bee-keepers' convention at Wharton, Tex., Dec. 26 and 27, will be well taken care of. Mr. W. O. Victor, of that place, says in a private letter that he is making arrangements to entertain a large crowd, and will do all in his power to make it pleasant for all who attend. Better go, for those Texas folks know just how to have a good time at a bee-convention. I hope it will be a Victor-ious meeting!

Yes, You Can Afford to take the Bee Journal next year—in fact, you *can't* afford to be without it. My word for it, the old American Bee Journal will be better than ever in 1896. It will contain more good, practical matter on bees than any preceding year's numbers. That's saying a good deal, but you'll see it will prove true, if you continue on the list of regular subscribers.

This may be the last number of the Bee Journal you will get. Just think over all the valuable things that have appeared in its pages this year, and then say whether you can afford to be without its weekly visits. I don't believe a single subscriber will permit us to stop his or her subscription, if he or she is at all interested in bee-keeping. Better drop off something else, rather than let your "Old Reliable" friend stop coming to see you.

Hadn't you better say, "Come on, Old Bee Journal; here's my dollar for another year?"

Query No. 1000 is answered in this issue of the Bee Journal. Think what that means! Consider the amount of information the replies to the 1000 questions have contained! For just 11 years now the query department has been continued in this journal—an average of a trifle over 90

questions being answered in a year. It is one of the strong points of the Bee Journal, and while other bee-papers have at various times begun a query-box department, sooner or later they have dropped it out. The Bee Journal is the only one that has continued it with scarcely a break.

With 1896 the questions will begin again with No. 1, and run on toward the 1000 mark as before.

The able corps of experts who have so kindly and wisely answered the many questions propounded during the past 11 years, are entitled, and I believe have, the unanimous thanks of the Bee Journal readers for their efforts to freely give the best replies they knew to each and every question asked. Most of those whose names appear in the Query-Box department, I believe, have been with it from the very first year. Only a few times have the ranks been broken by death—so infrequently that it is almost a "charmed circle." Long may the veterans live to continue to give out the results of their ripened apiarian experience!

The Annual Index appears in this number, as usual. It forms a sort of recapitulation of the contents of the Bee Journal for 1895. What a mass of information it indicates! Over 800 large pages, and thousands of topics compressed into about 4 pages of index! I think a little just pride in the results attained in the Bee Journal this year may be pardoned. I am sure all who have read it carefully have been repaid many times for the small subscription price invested. Those who preserve their weekly copies of the Bee Journal will value this index number very highly, as it is a great aid in referring to everything that has appeared during the present year,

A New Binder for holding a year's numbers of the American Bee Journal, we propose to mail, postpaid, to every subscriber who sends us 15 cents in addition to paying for his or her subscription for 1896. It is called "The Wood Binder," is patented, and is an entirely new and very simple arrangement. Full printed directions accompany each Binder. Every reader should get it, and preserve the copies of the Bee Journal as fast as they are received. Why not begin with Jan. 1 to save them? They are invaluable for reference, and at the low price of the Binder you can afford to get it yearly.

If your subscription is already paid for 1896, send 15 cents for the Binder. If any one desires two of the Binders—one for 1895 and one for 1896—send 25 cents, and they will be mailed to you.

Wisconsin Farmers' Institutes is a book of about 300 pages, nicely bound in cloth, edited by Mr. Geo. McKerrow, Supt., Madison, Wis., to whom application may be made for copies. Prices to those outside the State are, 25 cents for the paper-covered edition, and 40 cents for the cloth-bound; to Wisconsin farmers, 10 cents for the former, and 25 cents for the latter. It is finely illustrated, and a very complete and interesting work—a sort of "Hand-Book on Agriculture."

Two Ill-Paid Benefactors is the subject of an interesting article by Mr. Wm. H. Coleman, in the New York Independent for Nov. 21, 1895. One of the two was Father Langstroth, to whom Mr. Coleman pays a fine tribute. For 10 cents, a copy of that number of The Independent can be obtained. It is a splendid issue, being a special "Book Number." Address, 130 Fulton St., New York, N. Y.

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

What About Numbering Hives?

Query 1,000.—1. Is it advisable to number hives?

2. If so, should the numbers be permanently attached to the hive, or detachable?—Mo.

H. D. Cutting—1. Yes. 2. Detachable.

Rev. M. Mahin—1. Yes. 2. Detachable.

P. H. Elwood—I have never used numbers.

Chas. Dadant & Son—1 and 2. Yes, paint it on the hive.

W. G. Larrabee—1. Yes. 2. I use them permanently attached.

R. L. Taylor—1. If the apiarist has plenty to do, I hardly think it is.

J. A. Green—1 and 2. I prefer to number the location, not the hive.

W. R. Graham—1. It is well enough, but not essential. 2. I prefer the numbers detachable.

J. M. Hambaugh—1. Yes. 2. My numbers are detachable, yet this is of minor importance.

E. France—1. Yes, if you want to keep a record of what you are doing. 2. Attached to the hives.

Rev. E. T. Abbott—1. I do not know; it all depends upon what you want to do with them, how many you have of them, and the fellow who is to handle them. Fix them the way you can get the most *honey* for the least *money*. 2. This, like selecting a wife, is a thing in which every one should suit himself. On general principles, the less there is loose about a hive the better it suits me; but you may not be "built that way."

G. M. Doolittle—I used to number hives, but do not now, as I see no real advantage in it for Doolittle.

Mrs. L. Harrison—1. The last four years it made no difference whether numbered or not. 2. Best detachable.

Eugene Secor—1. There are some advantages in the practice. 2. I think I prefer the numbers on tags, detachable.

B. Taylor—1. I have never made numbering hives pay for the trouble. 2. If I used numbers, I would have them detachable.

Jas. A. Stone—1. Yes. 2. I think they ought to be painted on the hives, then a corresponding number on the stand they occupy.

Mrs. J. N. Heater—1. It is more convenient if you have many, or wish to keep a record. 2. I paint the numbers on permanently.

Dr. J. P. H. Brown—1. Whether it is advisable or not, depends upon how swarming is managed and colonies worked. 2. It is best to have them detachable.

Prof. A. J. Cook—1. It is absolutely necessary if we keep track by note-book. 2. I prefer card or slate. If I used numbers, I prefer card, so as to change if I desire.

Allen Pringle—1. It is advisable for some people, but is not necessary for all. When I first set out in bee-keeping on my own account, I carefully numbered all my hives (painted the numbers on), and had ever so much more "clock-work," fuss and routine than I have now. I keep a record of the colony's season's doings on a little paper under the cover, and on the cover. Before putting the bees into winter quarters I remove these records (which, of course, show the age of the queens), numbering them from one up, and putting the same numbers to correspond, in pencil, on the hives. In the spring, when the hives are gone over and examined, these records are returned to their *proper* places. 2. Detachable.

Dr. C. C. Miller—1. I think it is for me. 2. I want the tags easily detachable, so that if I let two hives exchange stands, the tags can be exchanged. The number on a given stand always remains the same.

C. H. Dibbern—1. I have abandoned numbering hives, as in my management I would get mixed up all over the yard, *i. e.*, they would not remain in consecutive order. 2. If I used numbers, I should prefer them detachable.

J. E. Pond—1. That is just as one fancies. I deem it an advantage, myself, as I can then easily keep a record of them. 2. I use numbers that can be removed easily, if so needed. A small, square piece of metal, with the number stamped or engraved on it, that can be hung on the hive, I find cheap and very handy.

G. W. Demaree—1 and 2. I don't do it now-a-days, and cannot advise it. But when I did number my hives, years ago, I learned not to number them *permanently*, because I often found it necessary to remove the bees bodily from a hive into another, in order to repair the one I moved the bees out of. I prefer to use a chalk-mark, understood by myself only, varied to suit all conditions.

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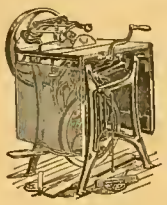

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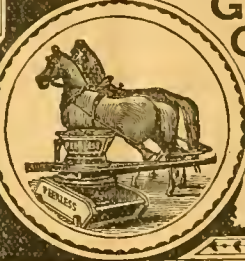

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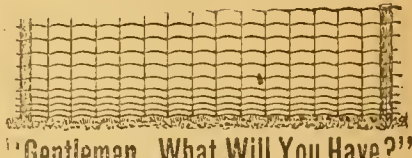

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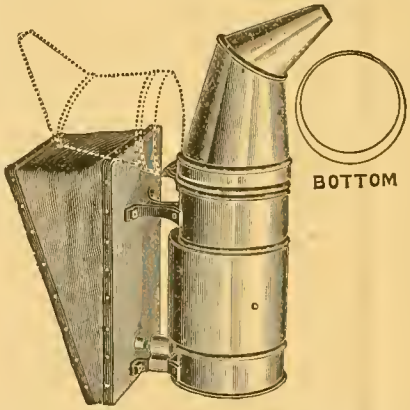

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